The mission of the Faculty of Engineering and Architecture is "to offer educational programs of the highest standard, promote research and the creative scholarly activities of its faculty and students, and provide services to the community at large, with special consideration given to the needs and circumstances of Lebanon and the region." In particular, the FEA mission of providing services to the community was clearly evident during the war in the summer of 2006 and its aftermath. Many FEA faculty and staff volunteered their time and expertise to help people in need and take part in the reconstruction efforts and they continue to do so. The FEA faculty and staff made all efforts to keep the FEA services functioning during the war and completed the summer term as soon as a ceasefire went into effect. Their efforts helped AUB start the fall 2006 semester on schedule.

The following are facts, figures, news and activities that took place in the FEA during the 2005-2006 academic year are in line with its mission.

In October 2005, 401 new undergraduates were admitted to FEA, and another 38 in February 2006. The total number of students enrolled in the undergraduate programs in the fall was 1,451 and 1,428 in the spring. There were 252 students enrolled in the graduate programs in the fall and 242 in the spring. Degrees were awarded to 292 undergraduates and 70 graduates.

Three new faculty members joined the FEA: Dr. Bazel Maddah, Assistant Professor in Engineering Management; Dr. Ghanem Oweis, Assistant Professor in Mechanical Engineering; and Dr. Issam Lakkus an Assistant Professor in Mechanical Engineering. Three faculty members left us: Dr. Christos Anastasiou, Assistant Professor in Civil and Environmental Engineering, decided to join a newly established research center in Cyprus; Dr. Wael Noureddine, Assistant Professor in Electrical and Computer Engineering, decided to return to Silicon Valley, California, to join a start-up company; and Dr. Farqad Alkhal, Assistant Professor in Engineering Management, left to dedicate time to her thriving investment company in Kuwait.

During the year the engineering departments worked hard to update their ABET documentation. However, the ABET governing board put the visit to AUB on hold because of the US Department of State travel warning to Lebanon.

The FEA kept moving ahead with its plans to start PhD programs in engineering. Dr. Mohsen Issa, University of Illinois at Chicago and Dr. Kumaeres Sinha, Purdue University, visited AUB in June 2006, with the approval of the New York State Education Department (NYSED), to evaluate the PhD proposal in Civil and Environmental Engineering. In the previous year, Dr. Ken Jenkins, Pennsylvania State University, and Dr. Munther Dahleh, MIT, visited AUB to evaluate the PhD proposal in Electrical and Computer Engineering, and Dr. Chahme Oweis and Dr. Cristina Amon, Carnegie-Mellon University, visited AUB to evaluate the PhD proposal in Mechanical Engineering. The applications for the doctoral programs are now in the hands of NYSED.

More than fifty FEA faculty members were invited to participate in academic, research and professional activities in the US, Canada, Europe and the region. Three went on long-term faculty development visits awarded by URB during the summer of 2006. Dr. Ayman Kayssi attended the AUB Board of Trustees (BOT) meeting in New York in November 2005 to present the recommendations of the Campus-Wide Strategic Committee on Information Technology; and Dr. Fouad Mrad attended the June 2006 BOT meeting as a Senate representative.

Research grants received by FEA faculty members during the academic year 2005-2006 include the following: The Lebanese National Council for Scientific Research approved 7 research proposals ($115,000) and the URB awarded 26 research grants ($156,000) to FEA faculty members. Eight external research projects ($1,614,000) are still in progress. Eleven new external research grants (total of $652,000) were received from the National Instruments, Ericsson-Lebanon, NTO/ISRC, CENSID, UNEP, UNOPS, Rathman Family Foundation, International Ports Management Beirut, Cooperative Housing Foundation, European Community, University of Alicante, and Ashrae. The FEA share of the university USADB/ASHRAE grant for 2005-2006 was $189,000.

The faculty members who received the Hewlett Foundation Research Leave were: Sylvia Shorto, Zeina Maastr, Walid Nassrallah, Kinda Khalaf, Ali Chehab, Mazen Saghir. Faculty members who went on approved paid research leaves were Prof. Hovayda Al-Harithy.
(one year) and Michael Stanton (one term), and Louay Jalloul was on an unpaid leave (one year). Faculty members who won approved one-term Maternity Leave with pay were Profs. Mona Fawaz and Dima Charif.

Dr. Nesreen Ghaddar was selected for the endowed Qatar Chair in energy, and Dr. George Ayoub was given an AUB Distinguished Service Faculty Award. Dr. Fadl Moukalled was elected a Fellow in CEMS and Dr. Hassan Diab had his “Secondment” to Doha University in Oman approved for a second year.

The Fifth FEA Student Conference was held in May 2006. Six alumni were awarded the FEA distinguished Alumnus Award. You can read about the conference and the distinguished alumni in this report. Dr. Hani Mahmassani, University of Maryland, one of the awardees, Jawhar, Roy Assaf, Jalal Haddad, Roy Baaklini, and Marwan Cortas,

Mikati to name the Engineering and Science Library; iii) $500,000 from Mr. Jassim Al-Qatami

James Wei visited delivered seminars in the Civil and Environmental Engineering Department. Trustee Dean

Ibrahim N. Hajj;

then be demolished to make way for the construction of the Irani/Oxy Engineering Building.

Rizk family to
donated $2,000,000 towards the construction of the

in engineering, and $1,500,000 towards the renovation of the Architecture Building. CCC

an Endowed Chair in Engineering, $2,500,000 endowment to support the PhD programs

Irani and Occidental Petroleum towards the construction of the Irani/Oxy Engineering

Over the past three years

in engineering students; viii) $50,000 from alumnus George Kadifa to support research projects

from Petrofac founder alumnus Maroun Semaan to support tuition fees of undergraduate

Sharjah, the Yusuf Mansour Scholarship for undergraduate students (annual); vii) $25,000 from Professor Emeritus Fateh Sakkal for the best graduate

project of (Roula Idriss); vii) Penrose Award: Rani Daher (cce).

The following donations, gifts, and pledges were received: i) A pledge of $5,000,000 from the Zakhem family to name the Zakhem FEA deanship; ii) $2,000,000 from Taha and Najib Mikati to name the Engineering and Science Library; iii) $500,000 from Mr. Jassim Al-Qatami towards the renovation of the Engineering Lecture Hall in the Bechtel Building; iv) $2,500,000 from Khabib & Alami towards naming the Cafeteria in the renovated Bechtel Building; v) $100,000 from Ramiz S. Rizk family to renovate the Engineering Board Room, which is now named the Ramiz S. Rizk Conference Room; vi) $50,000 from Mr. Raif Boutros, Basir Jawhar, Roy Assaf, Jalal Haddad, Roy Baaklini, and Marwan Cortas, cde project of (Mariam Agha), arch project of (Roula Idriss); vii) Penrose Award: Rani Daher (cce).

Students received the following awards in 2005-2006: i) Fawzi W. Azar Architecture Award ($10,000): Stephanie Akkaoui (70%) and Candice Naim (30%); ii) the 2005 Charli S. Korban Award: Antoine El Daher (ce 2005), Bernard Ghanem (ce 2005), Chinhua Adra (ce 2005) and Salim El Rouwayheb (cce 2005); iii) the 2006 Charli S. Korban Award: Rami Abdallah (ce 2006), Elias Yaacoub (cce 2006), iv) Abdul Hadi Debs Endowment Award for Academic Excellence at the graduate level: Rawad Saleh (me); v) Sakhl Renewable Energy Graduate Thesis Award: Mohammad Ayoub (me); vi) Distinguished Graduate Award: Rayyan Jaber (cce); Adel Yamout (ce); Lara Captan (co); Rola El Khouyr (Arch); vii) Dean’s Award for Creative Achievement: cce project of (Mansour Rachid and Hady Zeineddine), ee project of (Toufic Serral, Hussein Makki, and Ahmad Chibale), mxe project of (Paul Hajj Boutros, Bashir Jawhar, Roy Assaf, Jalal Haddad, Roy Baaklini, and Marwan Cortas), cde project of (Mariam Agha), arch project of (Roula Idriss); vii) Penrose Award: Rani Daher (cce).

Over the past three years AUB has received $3,000,000 from AUB alumnus Dr. Ray Irani and Occidental Petroleum towards the construction of the Irani/Oxy Engineering Building. Dar Al-Handassah (Shair and Partners) made three gifts: $2,500,000 to establish an Endowed Chair in Engineering, $2,500,000 endowment to support the PhD programs in engineering, and $1,500,000 towards the renovation of the Architecture Building. CCC donated $2,000,000 towards the construction of the ccc Scientific Research Building.

An official ceremony was held on February 21, 2006, for the re-naming of the Engineering Board Room as the “Ramiz S. Rizk Conference Room” in recognition of a donation from the Rizk family to FEA. A groundbreaking ceremony for the construction of the new ccc Scientific Research Building was held in October 2005; the building is scheduled to be completed in November 2006. The engineering laboratories that are now housed in Wings B and C will be moved to the ccc Scientific Research Building starting in December 2006. Wings B and C will then be demolished to make way for the construction of the Irani/Oxy Engineering Building.

Following an international competition, the design of the building was awarded to the Beirut-based Nabil Gholam Architecture & Planning firm.

Ibrahim N. Hajj

Dean
one | Introduction

The FEA Dean’s Office provides the services necessary for the promotion of the missions of the FEA and AUB, namely, to maintain educational programs of the highest quality, encourage and support research and creative scholarly activities, and provide services to the community at large. This is done through the joint efforts of various committees and support units, as well as the functions of the Dean’s Office itself. These committees and support units are listed in the next sections, composition, responsibilities, and in some cases brief summaries of their activities and accomplishments during the 2005-2006 academic year are included. In addition, the Dean’s Office maintains the financial and academic records of the Faculty, administers grants and contracts, decides on budgetary matters in coordination with the Faculties of Engineering and Architecture, and forms the link between the FEA and other Faculties and Schools of AUB as well as with the upper administration. The Dean’s Office initiates and maintains contacts with alumni, friends, and companies through personal visits, the Career Center services, laboratory services, the Job Fair, class reunions, the FEA Student Conference, and through its support of conferences, workshops, seminars, and invited speakers.

two | Personnel

Office of the Dean

Ibrahim Hajj; Dean, Fadl Moukalled; Associate Dean, Ghada Kamar Najim; Executive Officer of the Faculty, Alia Kazma Serhal; Student Services Officer of the Faculty

Staff

Dean’s Office

Souad Shaaban; Dean’s Secretary, Maya Kouzy; Clerk Typist, Edgard Touma; Messenger

Supplies, Reproduction and Buildings

Samir Bassil; Supervisor, Elie Touma; Technician

Computer Laboratories

Kamal Mikati; Supervisor, Aziz Natour; Senior Master, Raafat Hajj; Senior Master

Engineering Shops

Joseph Nassif; Supervisor, George Jardi; Senior Shop Master, Joseph Zoulikian; Material & Manufacturing Shop Master, Ramzi Safi; Senior Technician, Joseph Khoury; Senior Technician

IT Unit

Ziad Shaaban; IT Manager, Olga Safa Majzoub; Web and Software Manager, Maher Itani; System Analyst, Toufic Karout; Research Assistant, Saro Koulakisian; Senior Master, Elie Azzi; Research Assistant

Records Office

Nawal Abou Mosleh; Records Office Secretary

FEA Library

Khaled Noubani; Acting Librarian, Rabì’ Bu-Shahhì; Library Assistant, Ziyad Yamut; Library Assistant, Elie Haddad; Library Assistant, Salim Shehab; Library Assistant

IAEStE

Fadl Moukalled; National Secretary of IAEStE, Lebanon

Student Career Center

Nadia Moufarrij; FEA Career Counselor

3 | FEA Committees

Administrative Committee

Dean I. Hajj (chair), Associate Dean F. Moukalled, Professors: A. Kayssi, N. Ghaddar, L. Musfì, M. Mabsout, A. Abdul-Malak.

Function

As explained in the By-Laws of the FEA.

Composition

Dean I. Hajj (chair), Associate Dean F. Moukalled, Professors: A. Kayssi, M. Mabsout, N. Ghaddar, L. Musfì, Professors: A. Shihadeh, Ali Chehab, H. Assaf, M. Harb, Registrar, Faculty Representative on Senate Academic Development, FEA Student Representative, Omar Manjaged.

Advisory Committee


Function

As explained in the By-Laws of the FEA.

Composition

Dean I. Hajj (chair), Associate Dean F. Moukalled, Professor B. Hamad, Assistant Professors: M. Saghir, R. Hamade, D. Drennan, Director of Admissions: S. Kanaan, Faculty Representative on the UAC, M. Darwish, FEA Student Representative: Salim Hamad.

Research Committee


INTRODUCTION

The major activities of the Research Committee (FEA-RC) during the year 2005-06 were fourfold: (1) review of the Proposal Review Policy at FEA, (2) continued update of the FEA-RC Website, (3) conduct the review process, and (4) review two applications for paid leave. The FEA-RC received 31 proposals for research grants this year (31 in 2004-05), of which two proposals were group proposals (8 in 2004-05). One proposal was later withdrawn by the principle investigator because external funding was secured for it. Each proposal was evaluated by two external reviewers. The total number of proposals received from the various departments is shown in the table below.

<table>
<thead>
<tr>
<th>Department/Program</th>
<th>Number of Proposals</th>
<th>Recommended Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture and co</td>
<td>3</td>
<td>$18,275</td>
</tr>
<tr>
<td>Civil and Environmental</td>
<td>6</td>
<td>$37,113</td>
</tr>
<tr>
<td>Electrical and Computer</td>
<td>11</td>
<td>$73,000</td>
</tr>
<tr>
<td>Engineering Management</td>
<td>3</td>
<td>$15,750</td>
</tr>
<tr>
<td>Mechanical</td>
<td>7</td>
<td>$42,420</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>$189,558</td>
</tr>
<tr>
<td>Average per Proposal</td>
<td></td>
<td>$6,319</td>
</tr>
</tbody>
</table>
The FEA-RC is not involved in reviewing proposals for outside funding; the FEA-RC is only informed about these applications and the chairperson of the committee signs the application forms.

**REVIEW OF POLICIES AND PROCEDURES**

The FEA-RC went over the current FEA Policies and Procedures regarding the review process of proposals. The review process and score sheet were essentially kept the same as those of 2004/05 but the calculation of composite scores, for the purpose of ranking, was slightly modified in the review process.

**FEA-RC WEBSITE**

The website http://web.fea.aub.edu.lb/fea/research/rc.asp was updated regularly.

The deadline for submitting URB proposals was March 15, 2006, as specified by the URB. Before sending the proposals out for review, they were screened to ensure that they meet criteria set by URB and FEA. Then, each proposal was sent to two reviewers for assessment with the committee acting as a quality controller throughout the review process. The evaluation of each reviewer was appraised to ensure its consistency with the proposal. Finally, the proposals were ranked according to a composite score of 20, which took into consideration, the reviewer’s scores and recommendations. An additional 2 points were given to assistant or associate professors and an additional 1 point to group projects.

Historically, the total FEA URB research funding has been about $160,000 per year, slightly increasing over the years. Last year’s recommended budget was $169,000 in addition to seed money. This year the requested budget was $265,725 but was reduced to $189,558 by the FEA-RC.

**LEAVE REQUESTS**

There were two paid-leave applications in 2005-06; one was from the Department of Architecture and Design (Prof. L. Mustly) and the second was from the Department of Civil and Environmental Engineering (Prof. H. Basha). The two applications were sent to external reviewers and were approved by the RC following positive comments.

**COMPOSITION**

Graduate Studies Committee

M. Darwish (Chair), A. Kazma (Office of the Dean, Secretariat), B. Maddah (ECMT), H. Nakad (Registrar), S. Sadek (CENG), M. Darwish (ME, Chair)

The main activities of the FEA GSC this year were the following:

**GRADUATE APPLICATIONS**

This year there were 217 applicants to the various programs of the FEA, of these 165 were accepted equivalent to a 76% acceptance rate. This compares with 220 applicants and a 35% rejection rate for the 2004-05 academic year.

**PETITIONS**

The FEA GSC reviewed a number of graduate petitions, mainly for extending the thesis deadlines.

**THESIS PROPOSALS**

A large number of thesis proposals were reviewed. While the quality of the graduate thesis is the responsibility of the thesis committee, the main concern of the FEA GSC in reviewing the thesis proposals is to ensure that a preliminary literature review has been performed, and that the research activities are scheduled so as to be completed within a reasonable time.

The FEA GSC recommended that the Engineering Management program projects be approved at the program level without being referred to the FEA GSC.

**NEW AND MODIFIED GRADUATE PROGRAMS**

The FEA GSC studied and recommended approval of the EM Department proposal to reduce the course requirements in the Master program to 21 credits for courses while increasing the thesis credit equivalence to 9 credits.

The FEA GSC studied and recommended approval of the ECE Department proposal for a graduate program in Information and Communication Technology.

The FEA GSC studied and recommended approval of the ECE Department proposal for combining their two master programs into one master’s program in Electrical and Communication Engineering with both a thesis and a non-thesis option. The new program will offer eight research tracks.

**RECOMMENDATIONS**

The FEA GSC was involved at various stages with the University Graduate Admissions Ad hoc Committee in charge of reviewing the graduate admission process. Among the recommendations of the Ad hoc committee, was changing the admissions schedule from a rolling to a fixed deadline process with all graduate programs within AUB following the same deadlines except for the Faculty of Medicine, and publishing a graduate catalogue that clearly includes the requirements of the various programs.

**Library Committee**

**COMPOSITION**

G. Arbid, H. Basha (Chair), A. Chehab (ex-officio), F. Karameh, and K. Noubani.

The FEA Library Committee reports the following:

1. The remaining balance of the library budget per department as of May 2006 is as follows:

<table>
<thead>
<tr>
<th>Department</th>
<th>Annual Budget</th>
<th>Remaining</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture &amp; Design</td>
<td>$12,000</td>
<td>$2,862</td>
</tr>
<tr>
<td>Civil &amp; Environmental Engineering</td>
<td>$20,000</td>
<td>$5,831</td>
</tr>
<tr>
<td>Electrical &amp; Computer Engineering</td>
<td>$22,000</td>
<td>$8,204</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>$22,000</td>
<td>$10,300</td>
</tr>
<tr>
<td>Engineering Management</td>
<td>$1,000</td>
<td>$322</td>
</tr>
</tbody>
</table>

2. An overview of the tools and resources of the AUB libraries was presented by the Information Services Librarian to the committee. The statistics on usage show that the library tools are not fully used by FEA students. The committee proposed that there be an introduction of AUB library resources to the senior FEA students in the Final Year Project course at the beginning of the fall semester. There will be one tailor-made presentation per department and graduate students will be asked to attend.

3. The FEA library is undertaking a weeding process in which outdated books are removed from the library because of space limitations. The list of books that have not been checked out for the past five years, sorted by discipline and subject, were distributed to the FEA departments for help in this endeavor.

4. A 1-month free trial access to the ISI Web of Knowledge was arranged through the Serials Librarian. The free access included the Web of Science® service (Science Citation Index). The product has a prohibitive subscription cost, especially since AUB library already has a subscription to the Scopus database that does a similar type of search.

5. An overview of the 2005-2006 Spring and Fall Student Affairs Committee meeting was presented by Mohammad Mansour (Chair). The main points discussed were:

   a. A case involving the SAC representative on the committee. He was reported by the lab supervisor for breaking the glass window in one of the main doors of the lab. After determining the act was inadvertent with no bad intentions involved, the committee recommended that the student pay for the broken window and do community service.

   b. A follow-up on the previous year’s cases, with the progress made on the listed cases.
[1] A case involving one student in a lab who was asked by the professor to leave the room at the start of a class lecture. The student was not enrolled in that class. The student refused to identify himself and refused to leave the room. The committee viewed the case as a case of non-academic misconduct, and recommended referring it to the Dean of Student Affairs for consideration.

[2] Four students were recommended to the committee for violation of a contract they had signed for a GA appointment by working full-time outside of AUB. The committee was aware that the cases involved management issues between the university and the students and therefore were outside its jurisdiction.

[3] Five students were involved in cheating during a computer final exam. The students copied programming codes during the exam. The committee recommended all students receive a Dean’s Warning, and one of the students receive an additional written reprimand for lying to the committee.

[4] One student was recommended for asking another student a question about a problem during a final exam. The student did not receive an answer from the other student. The committee recommended the student receive a written reprimand for violating university regulations during the exam.

[5] Three students were reported for repeatedly trying to ask the proctor questions about a question during a final exam. One of the students was also found to be using a smartphone during the exam. The committee decided to dismiss the three cases.

[6] One student was recommended for his cell phone ringing during an exam. The committee recommended that the student receive a written reprimand for violating university regulations during the exam.

[7] A student was caught with miniaturized cheat sheets during a final exam. The committee dismissed one case, and recommended the other two students receive a Double Dean’s Warning and a warning on the final exam.

[8] Three students were reported for cheating on a final exam. The committee dismissed one case, and recommended the other two students receive a Double Dean’s Warning and a zero on the final exam.

[9] A case involving a student caught in one of the FEA computer labs hacking into a number of computers and deleting and corrupting files. The student had previously been asked not to enter the architecture building nor use any of the computer labs in FEA because of his past disruptive behavior. The committee decided to forward the case to the University Student Affairs Committee for study.

[10] A student involved in cheating during an exam. The committee stated that he had personal problems. The committee recommended the student receive a Dean’s Warning, a zero on the exam, and seek psychological counseling at AUB.

[11] A student involved in cheating during an exam. The committee recommended the student receive a Dean’s Warning and a zero on the exam.

[12] A student involved in cheating during an exam. The student had a problem with a personal nature. The committee recommended the student receive a Dean’s Warning and a zero on the exam.

[13] Two students were involved in signing attendance on behalf of two other students. The committee recommended all students receive a written reprimand.

[14] Two students involved in conducting a prank on another student and filming during his presence in the lab. The committee recommended the two students receive a written reprimand for their misbehavior. The committee also recommended warning the two students not to use the film in any way that might offend the other student.

Details of all these cases can be found in the minutes.

Review of the Penrose Award Nominations

Mr. Mohamed Hasna (cc)
Mr. Rani Daher (cc)
Mr. Ali Khalil (cc)
Mr. Suhaib Khouyri (cc)
Mr. Alfred El-Murr (me)

The committee reviewed the five nominations it received for the Penrose award, and recommended the first three students (Mr. Mohamed Hasna, Mr. Rani Daher, and Mr. Ali Khalil) as qualified nominees for the award.

Other Activities and Recommendations

[1] The SAC committee coordinated with the students’ Integrity Ad hoc committee in the Institutional Planning and Process Improvement Department to review the process of handling breaches of the student code of conduct as published in the Policies and Procedures on the AUB website. The objective was to come up with a common interpretation of related policies and procedures, and a unified way to report incidents of breach of the code (academic and non-academic).

The committee proposed the following (details are found in the minutes):
- The process flow for reporting academic and non-academic misconducts was revised, clearly indicating how a case should be handled and how it should proceed.
- The Student Code of Conduct was modified. The major modifications involve adding a recommended range of actions to academic and non-academic misconduct violations and a Dean’s Warning will be removed at the end of the student’s academic career with AUB provided the student’s records show a maximum of one code of conduct violation.
- A form that a faculty member will use to report a violation of the code of conduct.

[2] The SAC committee reviewed the Academic Integrity Handbook for Students upon request of the Dean, after it had been presented for discussion at a full Faculty meeting.

The committee determined that there is a considerable amount of redundancy between information stated in the handbook and the information that already exists in the Student Code of Conduct document. The committee recommended that the best way to promote academic integrity in the Faculty is to put the existing information into a different format. In 2006-07 the SAC committee will work with the Graphic Design Department to create power point presentations for students, post the information on the FEA Website and prepare brochure/fliers for students to increase their awareness about integrity and proper conduct at AUB. The committee further recommends to the Dean that the Faculty call students to attend the power point presentations.

[3] The committee also issued general recommendations to improve the administration of computer-based examinations. The recommendations are repeated below:
- More proctors should be present during these exams.
- During programming exams in computer labs, network connectivity should be disabled.

Ad hoc Committees

ABET Committee

COMPOSITION
F. Moukalled (chair); chairs of the engineering departments: N. Ghaddar, A. Kayssi, M. Mabrouk; professors: H. Bashir, A. Smaili; and accreditation officer B. McGreevy.

MEETINGS
Six full meetings of the ABET Committee were held during the academic year and smaller meetings were held to improve and update the individual program self-studies which were written during 2004-2005. The Associate Dean and the Accreditation Office held working sessions to improve and update Appendix II. A section on the Dean's Unit was created to clarify structure and more clearly define where decisions are being made.

WORK ACCOMPLISHED
The committee began its work in early October by recommending to the process of working toward ABET Accreditation. There was a desire to increase contact with ABET and involve the Provost's Office in this contact with the goal of encouraging reviewers to come to Lebanon or consider other options for the review process. It was agreed that the self-study reports compiled last year would be the basis of the reports submitted to the ABET Committee but that they would need to be updated and improved. A schedule of internal dates for each section of the report to be completed was agreed upon. Each department created a schedule to assure that the specific activities needed to assure feedback from constituents, record keeping, course files and the analysis of data would be completed in a timely and routine fashion. Because the structure for feedback loops had been developed last year for all programs only the schedule of actions needed to be assured.

During the fall semester the focus of work was on improving the courses offered especially during the first year and in math.
The Employer and Alumni Surveys were discussed and rewritten surveys will be administered this year. In January the application request for evaluation was once again submitted.

ABET Decision
On April 12, 2006 the Faculty was informed by the ABET Association that its application for accreditation had been put on hold until the US Department of State Travel Warning for Lebanon has been lifted.

Distinguished Alumni Presentations and Awards
Six distinguished alumni were selected to give plenary talks and receive awards. They were:

Dr. Habib Najm; a Distinguished Member of the Combustion Research Facility Sandia National Lab was awarded the FEA Distinguished Alumni Award in recognition of his outstanding scholarly contributions to research in combustion, stochastic methods for uncertainty quantification in scientific computing, and modeling of electrochemical microfluid systems and biotechnology devices. He earned his BE in Mechanical Engineering at AUD in 1985 and his MS and PhD at MIT 1986-1989.

Dr. Fawwaz T. Ulaby the R. Jamison and Betty Williams Professor at the University of Michigan, member of the National Academy of Engineering, and Editor in Chief, IEEE Proceedings received the FEA Distinguished Alumni Award in recognition of his outstanding achievements and contributions to education and to basic research in electromagnetics, microwaves, remote sensing technology, and their applications. Fawwaz T. Ulaby earned his BS in Physics at AUD in 1964 and his PhD from the University of Texas at Austin in 1968.

Mr. Abdallah S. Zakhem; Co-founder and President of the Zakhem International Construction Ltd., was awarded the Distinguished Alumni Award in recognition of his outstanding career in engineering and his contributions to the development of cellular and wireless communication systems. Dr. Ali Khayrallah was awarded the Distinguished Alumni Award in recognition of his outstanding research, inventions, and contributions to the development of cellular and wireless communication systems. Dr. Ali Khayrallah earned his BE in Electrical Engineering at AUD in 1976 and his MS, PhD from the University of Michigan, Ann Arbor, USA in 1978 and 1981.

Dr. Suad Amireh; the Director of Riwaq: Centre for Architectural Conservation in Ramallah, was awarded the Distinguished Alumni Award in recognition of her pioneering efforts in the study and protection of the architectural heritage of Palestine, and as a tribute to her courage, and passionate commitment to all humanitarian causes that seek to improve the daily lives of Palestinians in the West Bank and Gaza. Dr. Suad Amireh earned her BA in Architecture at AUD in 1976, her MS in Urban Planning at the University of Michigan; and her PhD at the University of Edinburgh in Scotland, UK.

Dr. Hani Mahmassani; the Charles Irish Sr. Chair in Transportation Engineering at the University of Maryland, was awarded the Distinguished Alumni Award in recognition of his excellence in research in the fields of transportation systems, transportation planning, and intelligent transportation systems, and his outstanding contributions to education. Hani Mahmassani attended AUD from 1973-1975; he received his MS in Transportation Engineering from Purdue University in 1978; and his PhD from Massachusetts Institute of Technology in 1982.

Student Presentations and Awards
In addition to plenary talks, students presented technical papers at the conference. The papers were reviewed by a faculty committee and selected from paper submissions by students based on their class projects. Poster sessions were also included. Copies of papers and the list of projects have been published in the conference proceedings. Awards were given to best papers and best poster.

[1] Best Paper Awards were given to the following students:
- Fadi Shaya (Architecture & Design) for “Enacting Public Space History and Social Practices of Beirut’s Harch al-Sanawbar”
- Nicolas Bekhazi, Mohammad Imani, Elias Nehme and Marc Rached (Civil & Environmental Engineering) for “Elevated Freeway between Beirut and Dbayeh”
- Mazen Abou Najm, Rani Dahe, Mohammad El Saadi (Computer & Communications Engineering) for “A Low Complexity Turbo Code Decoder”
- Salma Abu Izzeddin, Kamal Berhan, Hiba Obeid (Electrical Engineering) for “Electromagnetic Fields from Power Line”
- Bashar Akar, Raja Hamady, Abdellatif Lakdi, Wissam Saad (Mechanical Engineering) for “Designing, Building and Testing a Slitheren System”
- [2] Best Paper submitted by a Graduate Student was awarded to: Ihab Sraj (Mechanical Engineering) for “A Fully Coupled Finite Volume Method for Incompressible Fluid Flow”
- [3] Best poster award went to: Reem Al-Mokadem, Adham Bou Ghannam, Dima Fares, Rabih Choussayni (Electrical Engineering) for “CAD Optimization of PM Machines”
- [4] Special Recognition went to: Givat Cordahi (Civil and Environmental Engineering) for “Ethics and FEA.”

Strategic Planning Committee

COMPOSITION
Dean I. Haji; Professors: F. Moukalled, N. Ghaddar, A. Kayssi, M. Mabsout, H. Artail, M.A. Abdul Malak, I. Kayssi, and W. Sadek/L. Musif, Mr. A. Nahas as an invited guest, and accreditation officer/ sec. B. McGreavy.

MEETINGS
Six meetings of the spc committee were held during July and August. Thirteen meetings were held between October and March. Two meetings were held on April 25 and May 2 during which the Dean presented a draft of the Strategic Planning Report to the entire Faculty.

WORK ACCOMPLISHED
The committee completed the steps of the process outlined in “The Guide for Developing Academic and Administrative Strategic Plans” by the Office of Institutional Planning and Process Improvement at the American University of Beirut.

The members that worked during the summer focused on the accomplishments over the past three years and on the analysis of the strengths, weaknesses, opportunities and threats to the Faculty (swot analysis). There was a great deal of discussion and long lists were developed.

In the fall further refinement of the swot analysis took place. The mission and vision statements for the Faculty were discussed and slight changes were made.

All graduate and undergraduate programs clearly defined and submitted their missions and objectives.

In the spring the committee focused its energy on the clear statement and description of initiatives. Once again a long list was developed although only ten initiative templates were included in the final report.

Exit Surveys were revised to act as clear key point indicators (kpi) for the strategy map developed by the committee.

It was decided that two annual reviews of strategic performance will be conducted to ensure a clear assessment of progress and the continued faculty and staff input to the strategic planning process that is balanced across the Faculty.

A Strategic Planning Report of the Faculty of Engineering & Architecture was completed and submitted to the spsc.

Ad hoc Math Committee

COMPOSITION
Dean I. Haji (chair), F. Moukalled, N. Ghaddar, A. Kayssi, and M. Mabsout.

REPORT ON ACTIVITIES
The committee held several meetings during which the following issues were discussed:
- Math requirements in engineering, the possibility of canceling the ASST Category of courses, and moving the ASST math related courses to the department of mathematics. The final
recommendations made by the committee, which were subsequently approved by the Administrative Committee, are as follows:

[1] Cancel the asst category of courses starting fall 2006-07.
[3] Math requirements in the various engineering programs, which were approved by the various engineering departments, have become as follows:

- CEE
  - Current students: AST 310 was replaced by STAT 230, AST 313 was replaced by MATH 251, and AST 312 was replaced by MATH 212 or MATH 218 or MATH 281 or any other math course as approved by the CEE department.
  - New requirements: MATH 201, 202, 203, STAT 250 and one MATH elective (212, 218, 281, or any other math course as approved by the CEE department).

- ECE
  - Current students: AST 311 was replaced by STAT 230, AST 312 was replaced by MATH 218, and AST 313 was replaced by MATH 212.
  - New requirements: MATH 201, 202, 211, 218, and STAT 250, and one restricted elective out of MATH 210, 224, 227, and 251.

- ME
  - Current students: AST 311 was replaced by STAT 230, AST 312 was replaced by MATH 218, and AST 313 was replaced by MATH 212 and AST 310 by ENMG 504.
  - New requirements: MATH 201, 202, 212, 218, 251, and STAT 250.

[4] For information:

- The AST 520 course was moved to Engineering Management and given the number ENMG 504.
- The music course AST 420 offered by Prof. Azoury, which is already cross-registered with the FAS, was moved the Music Department. The course will continue to be offered by Prof. Azoury.

FEA Space Committee

COMPOSITION
Dean Ibrahim Hajj, Professors: Fadi Moulkhaled, George Ayoub, Ayman Kayssi, Leila Musfy, Neureen Ghaddar, Mourir Mabsout, M Asem Abdul Malak, Assistant Professor: Alan Shihadeh, V/P Samer Maamari, Director: Marcelino Romanos, FPOU members: Mr. Alan Eid, Mr. Anis Abdallah.

FUNCTIONS
The committee manages the physical space of the FEA quadrant. It is working closely with the designers of the new Irani/Oxi Engineering Lab Building to identify the functionality of zones within the building, their distribution, and the space requirements. The committee is also involved in advising renovation of existing FEA buildings.

FEA IT Committee

(Formerly Web Site Committee)

COMPOSITION
Dean Ibrahim Hajj (Chair), Professors: Marwan Darwish, Toufic Mezher, Salah Sadek
Associate Professors: Hassan Artaill, Daniel Drennan, and Mr. Ziad Shaaban, Ms. Olga Safa Majzoub, Mr. Maher Itani, Mr. Kamal Mikati

FUNCTIONS
The committee oversees the quality and recommends upgrade and changes to the FEA Website.

FEA Space Committee

COMPOSITION
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FUNCTIONS
The committee oversees the quality and recommends upgrade and changes to the FEA Website.

Recommendations for the Year 2006-07

Attend training sessions and workshops related to student services excellence and academic performance outside AUB and in the US.

Record’s Office

STAFF
Nawal Abu-Mosleh: secretary

FEA Space Committee

ACCOMPLISHMENTS DURING 2005-06
[1] A new more efficient form is being developed for Confidential Proctoring Reports.
[2] Continued updating of all files at the end of every semester
[3] Continued updating of files with petition results after every Academic Committee meeting.

RECOMMENDATIONS FOR 2006-07
In order to fully automate the Record’s Office and maintain a responsible archival system the following steps are recommended for 2006-07:

[1] Give priority to technical assistance from the IT Unit in order
  - to recommend the purchase of appropriate equipment to improve the scanning ability in the office;
  - to develop a process to include Dean’s Honor, Dean’s Warning, Evaluation Forms, and access to copies and number of Academic Petitions in the individual student electronic files;
  - to further improve the room reservation process by making it possible for the faculty to activate a reservation in an available time slot by simply entering their password on line (This process would bypass the person in charge of the reservation schedule except if there is a cancellation.)
[2] Purchase suitable archiving cabinets for the office and allocate space for them in the renovation plans.

Career Center

STAFF
Mrs. Nadia Mounfarej, FEA Career Counselor; Maher Itani, System Analyst; and two students who each work forty hours a month.

During the academic year 2004-2005 the FEA Career Center catered to the needs of approximately one hundred and forty five companies (145) and one thousand two hundred and ninety (1,290) registered students and alumni. For the year 2005-2006, and as a result of the enhancements to the FEA Online Career Center, and the networking efforts, there is a total of two hundred eighty six (286) registered companies using the website to post job
A survey was conducted of the graduating class of 2006 to determine their future plans. Plans after graduation by major:

<table>
<thead>
<tr>
<th>MAJOR</th>
<th>GRADUATE STUDIES</th>
<th>EMPLOYMENT</th>
<th>BOTH GRADUATE STUDIES AND EMPLOYMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE</td>
<td>21%</td>
<td>64%</td>
<td>15%</td>
</tr>
<tr>
<td>EE</td>
<td>30%</td>
<td>57%</td>
<td>18%</td>
</tr>
<tr>
<td>ME</td>
<td>18%</td>
<td>64%</td>
<td>18%</td>
</tr>
<tr>
<td>CEE</td>
<td>39%</td>
<td>44%</td>
<td>17%</td>
</tr>
<tr>
<td>ARCH</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>GD</td>
<td>0%</td>
<td>67%</td>
<td>33%</td>
</tr>
</tbody>
</table>

**Computer and Communications Engineers (CCE)**

- 73% (26 students) are planning to pursue graduate studies.
- 39% (14 students) are planning to pursue graduate studies.
- 21% (7 students) are planning to pursue graduate studies.
- 18% (6 students) are planning to pursue graduate studies.
- 17% (6 students) are planning to pursue graduate studies.
- 10% (3 students) are planning to pursue graduate studies.
- 7% (2 students) are planning to pursue graduate studies.
- 3% (1 student) are planning to pursue graduate studies.

**Civil and Environmental Engineers (CEE)**

- 70% (21 students) are planning to pursue graduate studies.
- 77% (13 students) are planning to pursue graduate studies.
- 74% (13 students) are planning to pursue graduate studies.
- 72% (13 students) are planning to pursue graduate studies.
- 71% (12 students) are planning to pursue graduate studies.
- 70% (12 students) are planning to pursue graduate studies.
- 69% (12 students) are planning to pursue graduate studies.
- 68% (11 students) are planning to pursue graduate studies.
- 67% (11 students) are planning to pursue graduate studies.
- 66% (11 students) are planning to pursue graduate studies.
- 65% (11 students) are planning to pursue graduate studies.
- 64% (11 students) are planning to pursue graduate studies.
- 63% (10 students) are planning to pursue graduate studies.
- 62% (10 students) are planning to pursue graduate studies.
- 61% (10 students) are planning to pursue graduate studies.
- 60% (10 students) are planning to pursue graduate studies.
- 59% (10 students) are planning to pursue graduate studies.
- 58% (10 students) are planning to pursue graduate studies.
- 57% (10 students) are planning to pursue graduate studies.
- 56% (10 students) are planning to pursue graduate studies.
- 55% (10 students) are planning to pursue graduate studies.
- 54% (10 students) are planning to pursue graduate studies.
- 53% (10 students) are planning to pursue graduate studies.
- 52% (10 students) are planning to pursue graduate studies.
- 51% (10 students) are planning to pursue graduate studies.
- 50% (10 students) are planning to pursue graduate studies.
- 49% (10 students) are planning to pursue graduate studies.
- 48% (10 students) are planning to pursue graduate studies.
- 47% (10 students) are planning to pursue graduate studies.
- 46% (10 students) are planning to pursue graduate studies.
- 45% (10 students) are planning to pursue graduate studies.
- 44% (10 students) are planning to pursue graduate studies.
- 43% (10 students) are planning to pursue graduate studies.
- 42% (10 students) are planning to pursue graduate studies.
- 41% (10 students) are planning to pursue graduate studies.
- 40% (10 students) are planning to pursue graduate studies.
- 39% (10 students) are planning to pursue graduate studies.
- 38% (10 students) are planning to pursue graduate studies.
- 37% (10 students) are planning to pursue graduate studies.
- 36% (10 students) are planning to pursue graduate studies.
- 35% (10 students) are planning to pursue graduate studies.
- 34% (10 students) are planning to pursue graduate studies.
- 33% (10 students) are planning to pursue graduate studies.
- 32% (10 students) are planning to pursue graduate studies.
- 31% (10 students) are planning to pursue graduate studies.
- 30% (10 students) are planning to pursue graduate studies.
- 29% (10 students) are planning to pursue graduate studies.
- 28% (10 students) are planning to pursue graduate studies.
- 27% (10 students) are planning to pursue graduate studies.
- 26% (10 students) are planning to pursue graduate studies.
- 25% (10 students) are planning to pursue graduate studies.
- 24% (10 students) are planning to pursue graduate studies.
- 23% (10 students) are planning to pursue graduate studies.
- 22% (10 students) are planning to pursue graduate studies.
- 21% (10 students) are planning to pursue graduate studies.
- 20% (10 students) are planning to pursue graduate studies.
- 19% (10 students) are planning to pursue graduate studies.
- 18% (10 students) are planning to pursue graduate studies.
- 17% (10 students) are planning to pursue graduate studies.
- 16% (10 students) are planning to pursue graduate studies.
- 15% (10 students) are planning to pursue graduate studies.
- 14% (10 students) are planning to pursue graduate studies.
- 13% (10 students) are planning to pursue graduate studies.
- 12% (10 students) are planning to pursue graduate studies.
- 11% (10 students) are planning to pursue graduate studies.
- 10% (10 students) are planning to pursue graduate studies.
- 9% (10 students) are planning to pursue graduate studies.
- 8% (10 students) are planning to pursue graduate studies.
- 7% (10 students) are planning to pursue graduate studies.
- 6% (10 students) are planning to pursue graduate studies.
- 5% (10 students) are planning to pursue graduate studies.
- 4% (10 students) are planning to pursue graduate studies.
- 3% (10 students) are planning to pursue graduate studies.
- 2% (10 students) are planning to pursue graduate studies.
- 1% (10 students) are planning to pursue graduate studies.
- 0% (10 students) are planning to pursue graduate studies.

**Electrical Engineers (EE)**

- 64% (47 students) plan to work after receiving their BE degree; 51% (twenty four students) have already signed contracts and started work; 32 out of 47 students (68%) have received multiple job offers; 15 students have not received any job offer; and 17% (eight students) are in the process of evaluating their options.

**Mechanical Engineers (ME)**

- 66% (46 students) are planning to pursue graduate studies; 45% (18 students) are planning to pursue graduate studies; four of them plan to continue at aub for their master’s degree while working at the same time.

**Civil and Environmental Engineers (CEC)**

- 47% (26 students) are planning to pursue graduate studies.
- 13% (7 students) are planning to pursue graduate studies.
- 8% (4 students) are planning to pursue graduate studies.
- 5% (3 students) are planning to pursue graduate studies.
- 3% (2 students) are planning to pursue graduate studies.
- 2% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.

**Other Majors**

- 51% (10 students) are planning to pursue graduate studies.
- 36% (7 students) are planning to pursue graduate studies.
- 28% (5 students) are planning to pursue graduate studies.
- 23% (4 students) are planning to pursue graduate studies.
- 16% (3 students) are planning to pursue graduate studies.
- 10% (2 students) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.

**Support Units**

- 10% (2 students) are planning to pursue graduate studies.
- 5% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.

- 3% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.

- 0% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.

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- 0% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.
- 0% (1 student) are planning to pursue graduate studies.

- 0% (1 student) are planning to pursue graduate studies.
**Profile of Summer Interns 2006**

A total of two hundred and eighty eight students registered with the FEA Career Center. 78% (224) secured internship positions through the FEA Career Center. They were divided as follows:

<table>
<thead>
<tr>
<th>Major</th>
<th>Total # of Interns</th>
<th>Internship Through FEA Career Center</th>
<th>Internship on Own</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCE</td>
<td>96</td>
<td>81</td>
<td>15</td>
</tr>
<tr>
<td>EE</td>
<td>48</td>
<td>40</td>
<td>8</td>
</tr>
<tr>
<td>CEE</td>
<td>42</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>ME</td>
<td>85</td>
<td>66</td>
<td>19</td>
</tr>
<tr>
<td>GD</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>ARCH (all years)</td>
<td>14</td>
<td>12</td>
<td>2</td>
</tr>
</tbody>
</table>

The FEA Career Center received a total of 485 internship offers from companies and universities, and 16 offers through the International Association for the Exchange of students for Technical Experience (IAESTE). The number of internship offers received was higher than the number of students requesting placement, as a result some of these offers had to be graciously declined. The offers received were divided as such:

<table>
<thead>
<tr>
<th>Major</th>
<th>Number of Students</th>
<th>Number of Offers Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCE</td>
<td>96</td>
<td>113</td>
</tr>
<tr>
<td>EE</td>
<td>48</td>
<td>105</td>
</tr>
<tr>
<td>CEE</td>
<td>42</td>
<td>78</td>
</tr>
<tr>
<td>ME</td>
<td>85</td>
<td>149</td>
</tr>
<tr>
<td>GD</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>ARCH</td>
<td>14</td>
<td>28</td>
</tr>
</tbody>
</table>

**Conclusions**

1. Close cooperation exists between the FEA Career Center and companies for internship and recruitment purposes.
2. Cooperation between FEA Career Center and companies has helped to identify future leaders through the Young Arab Leaders Program (YAL).
3. Developments on the FEA Career Website have enhanced the number of users of the website.
4. The increase of online offerings now includes an interactive discussion forum to respond to students, alumni and companies, and a webpage that allows students to schedule appointments, check their status and receive updated information. 5.) There has been an increase in the level of involvement of alumni in career networking and internship development.

**Recommendations for 2006-2007**

1. Increase guidance and counseling by addressing issues relative to career concerns and goal setting by offering workshops and seminars that prepare students for the workplace and assist them in developing skills employers want.
2. Create effective and efficient support systems for the staff, resources, services, space, and equipment.
3. Enhance the FEA Online Career Center to: involve all aspects of electronic recruiting and electronic statistical analysis; increase company participation on local, regional and international levels; increase student and FEA graduate registration; improve methods of communication between the Center and the FEA students, graduates and industry whereby the FEA Online Career Center becomes a highly interactive site.

**FEA Nominations**

In exchange for the 13 offers, FEA received 19 offers from abroad. A summary of these offers is given below:

<table>
<thead>
<tr>
<th>Name</th>
<th>Major</th>
<th>Country</th>
<th>Corporation/University</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul Haj Boutros</td>
<td>ME</td>
<td>Austria</td>
<td>Institute of Metallurgy</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Abdulnasser</td>
<td>Arch</td>
<td>Brazil</td>
<td>At Arquitectos Assocados</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Mohammad Tarhini</td>
<td>EE</td>
<td>Germany</td>
<td>TU Chemnitz</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Nabile Mansour</td>
<td>CEE</td>
<td>Norway</td>
<td>Norwegian National Railway Administration</td>
<td>Pending Visa</td>
</tr>
</tbody>
</table>
### Information Technology Unit

<table>
<thead>
<tr>
<th>NAME</th>
<th>MAJOR</th>
<th>COUNTRY</th>
<th>CORPORATION/UNIVERSITY</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mansour Rachid</td>
<td>CCE</td>
<td>Spain</td>
<td>Harvard Optimetry</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Acile Sleiman</td>
<td>CCE</td>
<td>Tunisia</td>
<td>Hexabyte</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Mireille Zafite</td>
<td>ARCH</td>
<td>Tunisia</td>
<td>Cabinet d’architecture Karray</td>
<td>Declined</td>
</tr>
<tr>
<td>Magali Assaf</td>
<td>ME</td>
<td>UK</td>
<td>University of Wales</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Roy Assaf</td>
<td>ME</td>
<td>Yugoslavia</td>
<td>University of Niš</td>
<td>Pending Visa</td>
</tr>
<tr>
<td>Joelle Mitri</td>
<td>CCE</td>
<td>Yugoslavia</td>
<td>University of Beograd</td>
<td>Pending Visa</td>
</tr>
<tr>
<td>Ahmad Abou Zahr</td>
<td>CCE</td>
<td>Jordan</td>
<td>GSM Operator</td>
<td>Not confirmed</td>
</tr>
<tr>
<td>Maya Abi Abd</td>
<td>CE</td>
<td>Germany</td>
<td>University Karlsruhe</td>
<td>Confirmed</td>
</tr>
<tr>
<td></td>
<td>EE</td>
<td>Brazil</td>
<td>UNICAMP</td>
<td>Cancelled (time)</td>
</tr>
<tr>
<td></td>
<td>EE</td>
<td>Colombia</td>
<td>Universidad de la Salle</td>
<td>No nomination</td>
</tr>
<tr>
<td>Bassam Abu Rabah</td>
<td>CE</td>
<td>Croatia</td>
<td>Gravia d.o.o.</td>
<td>Visa problem</td>
</tr>
<tr>
<td>Elias Nehmeh</td>
<td>CE</td>
<td>Denmark</td>
<td>Ramboll</td>
<td>Rejected</td>
</tr>
<tr>
<td></td>
<td>ME</td>
<td>Egypt</td>
<td>Egyptian Iron &amp; Steel</td>
<td>Offer cancelled</td>
</tr>
<tr>
<td>Jean Paul Akiki</td>
<td>CE</td>
<td>Turkey</td>
<td>ILLER Bankasi</td>
<td>No answer</td>
</tr>
<tr>
<td></td>
<td>ME</td>
<td>Iran</td>
<td>Esfahan Steel Company</td>
<td>No nomination</td>
</tr>
</tbody>
</table>

### Recommendations for 2006-2007

1. Explore regional contacts to share Iaeste positions received that are not appropriate, primarily due to length, for FEA students (without monetary cost to AUB).
2. Determine cost of Iaeste to FEA, consider a separate budget.
3. Explore the possibility of FEA participation at Iaeste International Night at the annual conference.
4. Include students in the management of exchanges with Iaeste, set up a student Iaeste Office at AUB and consider sending students to the annual conference.

### Staff

Ziad Shaaban; IT Manager; Maher Itani was appointed System Analyst; Toufic Karout was appointed as a full-time Research Assistant and is doing the job of System Administrator; Zoro Koulaolakian supervises the audio-visual equipment and the access control servers for the FEA labs, and is now doing the IT hardware part which handles the repair of all computer parts; Elie Azzi was appointed as a part-time Research Assistant and is doing the job of Security Analyst, Olga Safa Majzoub, Web and Software Manager.

### Introduction

This is the second year of operation for the IT Unit in the FEA. Given the experiences of last year there were some changes made in the unit’s personnel and management requirements. Among the many accomplishments of the year is the fact that this is the first year that there were no incidents of security or data loss.

### Changes in Management Requirements

The procedures in all areas (network, system development, web development, lab supervision, help desk etc.) were carefully observed during the process of project and task management. As the result of this, new requirements were put into place to assure efficiency, quality control, and careful documentation.

### Systems and Web Development

The number of the projects has increased as well as the experience of the staff. The following are now procedural requirements for every system or web development:

1. **File preparation:** A file is to be prepared by the IT manager that holds all the information related to a required project.
2. **Requirement of the project:** The developer must have a full understanding of the job to be automated; this is facilitated by scheduling meetings between the developer and the end user.
3. **Step-by-step documentation:** The minutes of all the meetings between the developer and the user must be recorded and presented to the IT manager for discussion.
4. **Internal meetings:** Meetings should be scheduled between the developer and the IT manager to discuss the status of the project: during the analysis stage one meeting per week and during the development stage two meetings per week.
5. **Database design (if required):** After knowing all the required data and the format to be used, a design of the database is prepared by the developer and shared with the IT manager and the user.
6. **User interface:** The developer and the user agree on the interface to be used taking into consideration the “user-friendly” requirement at this stage.
7. **User manual:** After the database and the user interface are agreed upon, a user manual for the system is to be prepared by the developer.

### System Administration

The criteria for checking on the IT Unit servers were changed due to the changes in the technology and the current security threats. Each server is now checked depending on its role and the data that it is holding. The checks are always done by more than one person; the Security Analyst checks all the vulnerabilities on the server and the code written by the developer. The System Administrator checks the server updates and virus protection as well as the capacity and hardware status. The System Administrator also checks the backup of the server. The System Administrator always checks the backup of the development and web server to ensure that all applications and databases are backed up.

As a result of the procedure described above no incident of security and data loss was recorded during this year.

### Internal Meetings

Weekly unit meetings are held to share ideas, perceptions and increase teamwork.

### IT Unit Accomplishments in 2005-2006

#### Upgrades on existing systems and tasks

1. **FEA Career:** Several features were added to the FEA career website to enhance performance and better serve its purpose. Some of these features are the search criteria and the permissions set up.
2. **FEA IT Admin web page:** This page is split into two parts one to handle all computer equipment and the other to handle all other lab equipment such as the electrical lab equipment.
3. **Call Center:** The call center is now part of the IT Admin web page so that a full history of calls received for a specific equipment and information on the owner will be stored and accessible in one place.
4. **Network upgrade:** There was a continuation of the upgrade done last year on the switches, now every switch in the FEA is linked to a Giga connection.
5. **Wireless Network:** PDA’s can now connect to the wireless network to check the mail as a first step. Mac users can now connect to the wireless LAN using a VPN client (VPN tracker costs $160); research is in progress to find a free client.
6. **Access control:** All FEA labs are now equipped with a card reader that enables the student to access the lab during non-working hours using his/her ID. The student has to complete a form and get the approval of the lab supervisor.
7. **Backup strategy:** The backup criteria have been changed; now each server is backed up daily, weekly, and monthly.
On going projects
[F] FEA Student Information System: This will be used by the student officer to prepare data and statistics some features of this system are currently being used by the student officer. This system is being developed using the new management requirements.
[F] FEA Facility Information System: After waiting for the completion of the system done for the administration by OIRA, the work on the system by the IT Unit has resumed. The work on this system is at the stage of collecting data and meeting with the user.
[F] FEA Alumni webpage: After several internal meetings it was agreed to change the current Alumni web page so that the database of the Career Center can make use of the alumni database. The creation of this system will follow the new management requirements.
[F] File server for dean’s office: The IT Unit is preparing a file server to be used by the dean’s office because the existing storage is limited.
[F] Engineering Management Compute lab: The IT Unit is finalizing the installation of the new computer lab in the RCL.
[F] Creation of an Information Research Lab: This lab will be created through donations and will include high performance machines with Oracle and CIS capability to be used for research.

Miscellaneous
[6] S&R move: Assist in the study of moving the computer labs to the new building
[5] Student Conference: Assist in the 5th Student Conference
[3] FYP: Assist the students during the Final Year Projects
[4] Help desk: Supervise and assist the graduate labs
[6] Lab supervision: Supervise the graduate labs

Plasma System: System to display data on the plasma located in the FEA lobby.

RECOMMENDATIONS
› Appoint a System Administrator rather than having a Research Assistant do the job. In the past three years 5 different people have been in this role.
› Hire a Security Analyst.
› Allocate a specific amount of money for a supply budget for the IT Unit.
› Create a regular time for heads of support units, chairs, the associate dean and the dean to meet informally with the goal of increasing communication and teamwork.
› All IT Units need regular training to stay abreast of changes in the field. It is therefore suggested that:
  - Ziad Shaban: receive the it management training “Leading Minds” ($1,700)
  - Mahen Itani: be trained in System Development
  - Soufie Karout: take System Administration Courses
  - Saro Koukalisian: receive hardware training
  - Olga Safa Majzoub: receive training in web development

LAB STAFF
Kamal Mikati: Supervisor, Aziz Natour: Senior Master, Raafat Haji: Senior Master

MAJOR WORK ACHIEVED IN FEA COMPUTER LABS (OCTOBER 2005 - JUNE 2006)
October 2005
› Preparing all lab schedules, arranging ASST 200 (Mech. dept.) lab sessions
› Installing HEC 3.1 Civil software in LAB 1, LAB 2 & LAB 3
› Installing ACADS 2004 software in LAB 1, LAB 2 & LAB 3
› Checking network proxy & DNS server settings in all labs
› Installing CIS software in LAB 1, Photoshop Software in LAB 3
› Checking Land Desktop & Civil Design software in LAB 1 & LAB 2
› Updating VHS1 software license server & all PCs
› Repairing laser printer in LAB 1
› New software image applied to all PCs in LAB 1 & LAB 2
› Installing Chemkin 4.0 software in LAB 2
› Installing Microsoft SQL server software in LAB 1 & LAB 2
› Installing requested software for Graphic Design Labs LAB 4 & LAB 7
› Erasing student profiles on all PCs in Labs
› Main Servers Backup and applying all Microsoft security and DELL updates

November - 2005
› Admin internal meetings and running online exam in labs for 220 students of ECON 211
› Updating and fixing virus scan problems in all labs
› Fixing damaged wiring network sockets in LAB 3
› Clean profiles and defrag all hard disks in LAB 3 & LAB 5
› General maintenance for all EMAC stations in LAB 7, including keyboards & mice
› Upgrading and installing new storage hard disk to CCTV Server
› Installing Magnet software in LAB 5
› Preparing annual lab budget for replacing old computers in LAB 3 & LAB 5
› Training lab staff on fire safety provided by Human Resources Dept. in College Hall
› Main Servers Backup and applying all Microsoft security and DELL updates
› Preparing lab layouts, configurations, dimensions for SBR requested by FPDU
› SBR (Scientific Research Building) where labs will be moved before September 15, 2006

December 2005
› Updating new VHS1 software license for server & all PCs in labs
› Clean profiles and defrag all hard disks in LAB 3 & LAB 5
› Install SQL debug software option in LAB 1 & LAB 2
› Meeting with SRC committee for applying new improvement issues covering students, network resources, and printing facilities
› Running approved LRCC Lebanese Red Cross Center Computer Literacy session in all labs on assigned Saturdays
› Preparing order for 20 PCs with latest specifications needed for new engineering software
› Training lab staff on Occupational Health Safety provided by dept.
› Running Aub library tutorial sessions for graduate students in computer labs
› Main Servers Backup and applying all Microsoft security and DELL updates

January 2006
› Preparing and submitting printing cost case study to the Dean, for FEA student quota
› Administrating and running online exam in labs for 220 students of ECON 211
› Running online final exam Pspice software in LAB 1, LAB 2, & LAB 3 (Dr. Kabalan)
› Running CIV 370 online final exam in LAB 1, LAB 2 on Saturday
› Installing SAP2000 software in LAB 1 (Dr. Mourad Mabssout)
› Preparing and providing all documents and pictures for designing internet lab web page under FEA site including Graphic Design Labs
› Running SOAN 201 online final exam in LAB 1, LAB 2 & LAB 3, Dr. Sari Hanafi
› Main Servers Backup and applying all Microsoft security and DELL updates

February 2006
› Running ES-Certify internet online programs on many PCs as requested by OIRA dept. to check validity of internet speed connections needed for online TOEFL test
› Improving student shared network drive accessibility, by changing server network connection from local FEA to all AUB public networks in corporation with CNS dept.
› Installing LABVIEW 7.1 & ProE (Mech dept.) software in LAB 6
› Installing SAP2000 software in LAB 3 (Dr. Mourad Mabssout)
› Preventive maintenance to all PCs and servers in labs
› Preparing with FPDU & CNS depts. network equipment list needed for new labs in SBR
› Ordering new 1 Giga network switch for new SBR computer labs
› Training lab staff on ergonomic safety offered by Human Resources Dept. in College Hall
› Main Servers Backup and applying all Microsoft security and DELL updates
› Improving lab entrance furniture, student stationary utilities and student night attendance desk

March 2006
› Installing new MATLAB license server in labs, and changing all setting of installed PCs
› Running approved LRCC license server in labs, and changing all setting of installed PCs

Applyng and checking Microsoft & Antivirus security patches in all PCs
Installing new HP color laser printer in Graphic Design Lab
Attending IT Computer Committee meeting in Dean’s Office, setting computer lab improvement plans within approved budget
Attending Academic Computing Center dept. meeting for arranging online WEBCT exams in Computer labs
on assigned Saturdays
- Changing and arranging network and electrical wiring in server room, and installing new server for ProE software with kvm switch
- Preparing needed network point's layout and study with fpo and CNS dept. for new SRB building
- Updating, arranging all lab pcs and student accounts in concerned labs/organization units ou in AUB win/k Active Directory
- Preparing summer lab schedule according to department requests received
- Order new network switch for new SRB building as per specifications recommended by CNS dept.
- Running approved LRCC Lebanese Red Cross Center Computer Literacy session in all labs on assigned Saturdays
- New numbering labels to all pcs in labs
- Fixing damaged wiring network sockets in lab 5
- Backup CCTV server and updating lab access card reader's accounts
- Preparing cost report, student work–study costs for spring semester

April 2006
- Installing 20 new pcs in lab 5 and installing all needed software
- Attending quarterly DELL Roadmap update in CNS dept.
- Testing new software image received from CNS in lab 1
- Running MECC 433 lab view exam in lab 1 & lab 2
- Attending Microsoft security presentation in EHL assigned by CNS dept.
- Training lab staff on electric safety offered by CNS & RM dept. in College Hall
- Administrative and running online exam in labs for 220 students of ECON 211

May 2006
- Installing DELL Bios hardware update for all pcs in lab 5 and lab 6
- Installing Varicut option in ProE software in lab 6 (Dr. Ramsey Hamadeh)
- Repair Laser printer in lab 5
- Running student registration sessions for summer term
- Attending FGOU, CNS and FEA SRB meetings
- Contributing in Network survey in FEA with CNS for SRB network design
- Arranging and preparing schedule and all technical procedures for moving labs to SRB building in summer with FEA coordinator Prof. Alan Shehadeh.
- Repairing Virus Alert Server in server room
- Assisting FEA students in online summer registration
- Administering and assisting in running all FEA lab final exams
- Assisting students in Final Year Project reports
- Preparing student work study and staff monthly attendance sheets

June 2006
- Administrative and running online exam in all labs for 220 students of ECON 211
- Administrative and running online exam in labs for SOAN 210 (Prof. Sari Hanafi)
- Contributing with CNS dept. in attending Microsoft Security presentation to system administrators
- Preparing labs for summer semester, installing needed software
- Preventive maintenance done to all computers and printers
- Preparing new requests for needed printers, supplies, and workshop spare parts

PCS CURRENTLY INSTALLED IN LABS:
<table>
<thead>
<tr>
<th>LAB</th>
<th>7:22 PCS</th>
<th>LAB 2</th>
<th>20 PCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAB 3</td>
<td>27 PC</td>
<td>LAB 4</td>
<td>17 Apple</td>
</tr>
<tr>
<td>LAB 5</td>
<td>22 PC</td>
<td>LAB 6</td>
<td>29 PCS</td>
</tr>
<tr>
<td>LAB 7</td>
<td>17 Apple</td>
<td>LAB 8</td>
<td>23 PC</td>
</tr>
</tbody>
</table>

Servers: 6
Staff: 4 PCS

We have 1,734 FEA students using computer labs
(1,438 undergraduate, 243 graduate students during night sessions)
A new windows xp image was installed on all student computers at the FEA Library to improve their performance.

**PATRON ATTENDANCE**
The following table shows the patron attendance for the academic years 2004-05 and 2005-06:

<table>
<thead>
<tr>
<th>ACADEMIC YEAR</th>
<th>NUMBER OF PATRONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td>232,223</td>
</tr>
<tr>
<td>2005-2006</td>
<td>222,433</td>
</tr>
</tbody>
</table>

Note: the number for 2004-05 has been changed from the one reported last year because the library is now calculating all figures from June > May 31 rather than from Oct. > Sept. 30. The patrons include faculty, staff, students, alumni, membership card holders and visitors. The number of patrons may be significantly lower this year because people know that there will be no place for them to work so they do not enter.

**SERVICES AT THE LIBRARY**
The following table shows the library service statistics for the academic years 2004-05 and 2005-06:

<table>
<thead>
<tr>
<th>ACADEMIC YEAR</th>
<th>CIRCULATION TRANSACTIONS (ISSUE OF BOOKS, RENEWAL RETURNS AND NON-LOAN RETURNS)</th>
<th>RESERVE MATERIALS TRANSACTIONS (BOOKS AND FILES)</th>
<th>HELP TRANSACTIONS (REFERENCE, INSTRUCTIONAL, AND DIRECTIONAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-2005</td>
<td>40,658</td>
<td>32,870</td>
<td>12,103</td>
</tr>
<tr>
<td>2005-2006</td>
<td>34,897</td>
<td>37,162</td>
<td>12,103</td>
</tr>
</tbody>
</table>

Note: there is a significant difference in the number reported for 2004-05 last year (61,916) for Reserve Materials Transactions both because of the change in dates for calculation, mentioned above, and an error in calculation last year.

**RECOMMENDATIONS FOR 2006-2007**
[1] Continued training of FEA Library staff. K. Noubani will take a leave from the library for one year to study for a master’s degree in library science at the University of Indiana. As was recommended last year, but did not occur because the courses were not offered by Human Resources: Rab’ Bu-Shahli take the advanced level in English, Ziyad Yamut take the business English course, Elie Haddad and Salim Shehab take the Service Excellence-Frontline workshop and Developing Secretarial and Administrative Skills sessions.
[2] Continue to select books, journals and databases that support the FEA curriculum and that meets the needs of the library patrons.
[3] The library will continue to offer sessions and workshops at the beginning of the academic year introducing AUB library resources to FEA students.
[4] Replace the colored photocopier with a new one.
[5] Replace the 2 guest computers with newer and faster ones.
[6] Consider completing the new library facility earlier for the following reasons:
- The seating space and the number of computers during rush hours do not meet the needs of the patrons
- There is no room for collection growth
- The building structure cannot hold more weight as it was not designed to be a library
- Excessive noise caused by students between classes and before and after exams and quizzes.
Other work completed
Mounted election rooms, allocated lockers, engraved labels, manufactured tables for various labs, and repaired furniture throughout the FEA.

RECOMMENDATIONS FOR MAINTAINING MODERN SHOPS IN 2006-2007
- Add new lathes, welding machines and an EDM machine (this will require some external staff training)
- Train staff in-house on CNC
In preparation for moving the shops to a smaller space consider developing a “Policy for Use of Shop Facilities.”

STAFF
Samir Bassil; Supervisor, Elie Touma; Technician

ACCOMPLISHMENTS
[1] Renovations completed of facades of Bechtel and the Terrace,
[2] Completed renovation of main electrical panel in the FEA Bldg.,
[3] Renovated the sound system in the Engineering Lecture Hall,
[4] Continued to provide and schedule use of all audio-visual equipment for FEA and Business Faculty,
[5] Continued to fill stationary requisitions and maintain an adequate stock of supplies and machine accessories for FEA Dean’s Office and departments,
[6] Continued to photocopy materials such as: quizzes, examinations, lab protocols, course handouts, scientific and research papers, slides, reports and publications for FEA,
[7] Continued to monitor maintenance and construction work performed by the Physical Plant for the FEA,
[8] Continued to attend to the needs and security of the offices and classrooms by checking lights, clocks, electric circuits, outlets and all main doors of the FEA buildings.

RECOMMENDATION FOR 2006-2007
[1] Replace all fan coil units in each classroom and office,
[2] Hire a technician assigned to work primarily in the architecture building,
[3] Purchase a new offset printing machine (the current one is 6 years old)
[4] Purchase 10 new lap top computers (there are currently 2 lap tops available for students and faculty through this office and there is an average of 25 requests a day for their use).
one | Introduction

The Department of Architecture and Design was active and productive during the 2005-2006 academic year. In the fall of 2005, five faculty members were on a one semester paid leave and one faculty member was on a one year paid leave. Thanks to the hard work and diligence of those present, the Department was able to conduct its activities and events. During academic year 2005-2006, the department had 11 full-time (out of which one was on leave), 2 visiting, and 25 part-time. The Department of Architecture and Design also housed 278 students: 139 in Architecture, 132 in Graphic Design, and 13 in the graduate programs of Urban Planning and Urban Design.

The Department advertised for positions in architecture and graphic design. The full-time faculty members formed the search committee and, upon completion of its reviews and discussions, recommended the hire of three new full-time faculty members in architecture, one visiting professor in architecture and two in graphic design.

Eight new electives were offered during the year in the areas of history, theory and representation: Beirut Modern offered by Georges Arbid; Writing the Manifesto offered by Karim Nader; Signs and Conflicts offered by Zeina Maasri; Spatiality of Urban Social Exclusion offered by Nadia Alayli; Advanced Arabic Typography offered by Samir Sayegh; Architectural Programming offered by Ayman Zahreddine; Digital Media for the Web offered by Lena Merhej; and Development Aid in the Mediterranean offered by Mona Harb.

The Department of Architecture and Design organized and hosted 14 lectures by researchers, professionals, and scholars in various fields including architecture, urban history and graphic design. The guest lecturers were: Michael Irving Jenson from IoME, Tarek Atoui, Eduardo Souto de Moura, Aloyz Lolo, Ali Cherri, Mirza Kaddoura, Natasha Iskander, Philippe Sonmolet, Nader Tehrani, Alex Amerianan, Bill Hill, Nat Muller, Olivier Philippe, Obeda Sidani, and Jean-Louis Cohen.

The Aga Khan Foundation held a 2-day forum and a workshop organized for students in Graphic Design conducted by Bill Hill. The annual City Debates seminar organized by the mupp/mud graduate program was entitled “Spaces for the Rich” and was held during the month of May 2006. The four sessions were on the themes of “Global Forces, Local Claims.” This year, Dr. Suad Amry (Arche ’72) received the “Distinguished Alumna” award during the FEAC 5th Annual Student Conference. Students participated in the 5th FEAC Student Conference, and also attended workshops and conferences in Germany.

The Graphic Design program celebrated its 10th year of graduates and 14 years of existence. A three-day event was held between June 19 and 21 and many graduates met for discussions, lectures and social events. An exhibit was held and a gala dinner was organized for the closing night.

Students in the Department were active participants and winners in a number of competitions, workshops, and conferences.

Leila Musfy, Chairperson

two | Personnel

Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hewayda Al-Harithy</td>
<td>Chairperson (on a one-year paid leave), Associate Professor</td>
<td>Architecture, PhD in Architecture and Historical Anthropology, Harvard University, USA.</td>
</tr>
<tr>
<td>George Arbib</td>
<td>Assistant Professor (Architecture), D. Des. in Architecture, Harvard University, USA.</td>
<td></td>
</tr>
<tr>
<td>Dina Charif</td>
<td>Assistant Professor (Graphic Design), MFA in Typo/Graphic Studies, ICP, UK.</td>
<td></td>
</tr>
<tr>
<td>Daniel Drennan</td>
<td>Assistant Professor (Graphic Design), MFA in Interactive Telecommunications, New York University, USA.</td>
<td></td>
</tr>
<tr>
<td>Mona Fawaz</td>
<td>Assistant Professor (Urban Planning), PhD in City Planning, MIT, USA.</td>
<td></td>
</tr>
<tr>
<td>Mona Harb</td>
<td>Assistant Professor (Urban Planning), PhD in Political Science, Institut d’Etudes Politiques, Aix-en-Provence, France.</td>
<td></td>
</tr>
<tr>
<td>Zeina Maasri</td>
<td>Assistant Professor (Graphic Design), MFA in Design, Jan van Eyck Academie, The Netherlands.</td>
<td></td>
</tr>
<tr>
<td>Leila Musfy</td>
<td>Acting Chairperson, Professor (Graphic Design), MFA in Design, Cranbrook Academy of Art, USA.</td>
<td></td>
</tr>
<tr>
<td>Walid Sadek</td>
<td>Assistant Professor (Graphic Design), MFA in Sculpture, the Claremont Graduate School of Art, USA.</td>
<td></td>
</tr>
<tr>
<td>Sylvia Shorto</td>
<td>Assistant Professor (Architecture and Design), PhD in History of Art and Archaeology, Institute of Fine Arts, New York University, USA.</td>
<td></td>
</tr>
<tr>
<td>Michael Stanton</td>
<td>Associate Professor (Architecture), MArch. Princeton University, USA.</td>
<td></td>
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<tr>
<td>Stephen Campbell</td>
<td>Visiting Assistant Professor (Architecture), MArch. in Urban Design, Harvard University, USA.</td>
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</tr>
<tr>
<td>May Farhat</td>
<td>Visiting Assistant Professor (Architecture and Design), PhD in Art and Architectural History, Harvard University, USA.</td>
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</tbody>
</table>

Part-time Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdul Halim Jabr</td>
<td>Lecturer (Architecture), MArch., MIT, USA.</td>
<td></td>
</tr>
<tr>
<td>Abir Khoury</td>
<td>Instructor (Architecture), Bachelor in Architecture, LAU, Lebanon.</td>
<td></td>
</tr>
<tr>
<td>Ahmad Gharib</td>
<td>Instructor (Graphic Design), MA in Photography &amp; Urban Cultures, Goldsmiths College, University of London, UK.</td>
<td></td>
</tr>
<tr>
<td>Ayman Zahreddine</td>
<td>Instructor (Architecture), MArch in Architecture and Urban Design, Harvard University, USA.</td>
<td></td>
</tr>
<tr>
<td>Bassam Kahwagi</td>
<td>Instructor (Architecture).</td>
<td></td>
</tr>
<tr>
<td>Bernard Mallat</td>
<td>Lecturer (Architecture), MArch., University of Maryland, USA.</td>
<td></td>
</tr>
<tr>
<td>Dallas Fawaz</td>
<td>Instructor (Graphic Design), MFA in Communication Art and Design, Royal College of Art, UK.</td>
<td></td>
</tr>
<tr>
<td>Gregoire Serof</td>
<td>Senior Lecturer (Architecture), Bachelor in Architecture, ALBA, Lebanon.</td>
<td></td>
</tr>
<tr>
<td>Habib Debs</td>
<td>Lecturer (Architecture), DESS in Urban Planning, Ecole des Ponts et Chaussées, France.</td>
<td></td>
</tr>
<tr>
<td>Hana Alamadine</td>
<td>Lecturer (Architecture), MS in Architectural Studies, MIT, USA.</td>
<td></td>
</tr>
<tr>
<td>Hanif Asfour</td>
<td>Lecturer (Architecture), MArch, Harvard University, USA.</td>
<td></td>
</tr>
<tr>
<td>Hassan Al-Assaad</td>
<td>Instructor (Architecture), MArch, Harvard Graduate School of Design, USA.</td>
<td></td>
</tr>
<tr>
<td>Jana Trablusi</td>
<td>Instructor (Graphic Design), Masters in Multimedia, Ecole Nationale Supérieure de Création Industrielle, France.</td>
<td></td>
</tr>
<tr>
<td>Jinnane Bacha</td>
<td>Lecturer (Graphic Design), MFA in Printmaking and Painting, Pratt Institute, USA.</td>
<td></td>
</tr>
<tr>
<td>Joumana Al-jabr</td>
<td>Instructor (Architecture), Executive MBA, Euro MBA with a consortium of European Universities.</td>
<td></td>
</tr>
<tr>
<td>Joy Kanaan</td>
<td>Instructor (Architecture), BArch, University of Southern California, USA.</td>
<td></td>
</tr>
<tr>
<td>Karim Nader</td>
<td>Instructor (Architecture), MArch., Rice University, USA.</td>
<td></td>
</tr>
<tr>
<td>Lena Merhej</td>
<td>Instructor (Graphic Design), MFA in Design &amp; Technology, Parsons School of Design, NY, USA.</td>
<td></td>
</tr>
<tr>
<td>Maha Nasrallah</td>
<td>Instructor (Architecture), BArch, American University of Beirut, Lebanon.</td>
<td></td>
</tr>
<tr>
<td>Marc Nader</td>
<td>Lecturer (Architecture and Design), Diploma, Ecole Supérieure de Commerce de Paris, France.</td>
<td></td>
</tr>
</tbody>
</table>
Faculty Search

The Department of Architecture and Design advertised for positions in architecture and graphic design and received thirty-six applications in architecture and twelve in graphic design. The ten full-time faculty members present, formed the search committee, chaired by Leila Murfi. Upon completion of its reviews and discussions, the committee short-listed four candidates in architecture and three in graphic design. The committee invited some for interviews and lectures: Han Asfour, Yasmine Abbas, and Robert Saliba in architecture; and Michele Wardeh, Walid Haddad, and Sirene Salam in graphic design. The search committee recommended the hiring of four new full-time faculty members in architecture and two in graphic design.

Staff

Sirene Salam; Department Secretary

Marguerite Spero; Lecturer (Architecture and Design), PhD University of Neuchatel, Switzerland.

Mayda Freije; Lecturer (Graphic Design), MS in Communication Design, Pratt Institute, USA.

Mazen Kerbaj; Instructor (Graphic Design), Bachelor in Graphic Arts and Advertising, ALBA, Lebanon.

Michele Wardeh; Lecturer (Architecture), Master in Sociology, Saint Joseph University, Lebanon.

Mohamad Hafeza; Instructor (Architecture), MA Design for the Environment, Chelsea College of Art and Design, University of the Arts London, UK.

Moustapha Majzoub; Lecturer (Architecture), BArch, AUB.

Nadia Aley; Instructor (Urban Planning), Master of Science in Housing, University College of London, UK.

Naj Assi; Instructor (Architecture), MUP in Middle East and Maghreb Cities, Paris Belleville, France.

Rafi Boyajian; Instructor (Graphic Design), BGD, AUB.

Rana Haddad; Lecturer (Architecture), AA Diploma RIBA, Architecture Association London, UK.

Rania Chosn; Instructor (Architecture), MS in Modernity, Space and Place, Department of Geography, UCL, UK.

Raya Khalaf; Lecturer (Graphic Design), MFA, Jan van Eyck Akademie, The Netherlands.

Samir Sayegh; Lecturer (Graphic Design).

Sany Jamal; Instructor (Architecture), BArch, American University of Beirut, Lebanon.

Sara-Jane Arida; Lecturer (Graphic Design), BFA in Communication Design, Parsons School of Design, USA.

Walid Haddad; Senior Lecturer (Civil Engineering), MS Civil Engineering, Georgia Institute of Technology, USA.

Mona Harb, Invited discussant:

Acted as a principal discussant at the APERAU (Association pour la promotion de l’Enseignement et de la Recherche en Aménagement et Urbanisme) International Conference Conquérir la ville. Réappropriation urbaine : acteurs, mécanismes et enjeux, organized by ALBA (Académie Libanaise des Beaux-Arts) and IFPO (Institut Français du Proche Orient), June 1-2, 2006.


Acted as a principal discussant at the conference on “Cities and Globalization: Challenges for Citizenship,” organized by Heinrich Boell Foundation and Institut Français du Proche Orient, hosted by the American University of Beirut, Beirut, December 9-11, 2005.

Acted as a discussant at the workshop “Cooperation across Ideological Divides in the Middle East,” organized by Janine Clark and Jillian Schwedler, Rockefeller Foundation’s Study and Conference Center, Bellagio, Italy, April 8-13, 2005.


Panelist at Coffee Break, a conference organized by Manifesta International Organization in Nicosia, Cyprus, January 26, 2006.

Panelist at Zawaya Encounters, Madina Theatre, Beirut, November 15, 2005.

Stanton, Michal: Invited symposium participant in “Exposing New Orleans” a conference on problems and potential post-Katrina, March 2006, Princeton University in collaboration with Columbia University. Presentation of work on typology and reconstruction in New Orleans and participation in formulation of concrete proposals.

Lecture “A Template for incremental Reconstruction: New Orleans and the politics of everyday work in extraordinary circumstances.”

Juried paper selected for presentation, the Second International Conference of The Arab Society for Computer Aided Architectural Design, Computing in Architectural Design: ReThinking the Discourse, April, 2006, Sharjah, UAE.

Lecture “Redemptive Technologies II: the sequel (a decade later)” referred.


“Engaging the City” Lectures, the National Arts Club, Oct. 2005, New York.


Habitat II ‘95, Beirut, Lebanon.

Fawaz, M. An Evaluation of Arab State Policies vis-a-vis Tenure Security and their Commitment in the Habitat II Summit

“The Production of Space in Beirut in the 1950s,” AUB, Beirut, Lebanon.

Organized a closed one-day workshop that grouped twenty urban researchers from Lebanon and abroad during which I presented the main findings of the current research I am conducting on the production of low-income neighborhoods in the eastern suburbs of Beirut during the 1950s-60s.
Consultancy reports


Stanton, Michael “The Bad and the Ugly: Globalism, Americanization and Lebanese urban sprawl” in the proceedings of the Prince Alwaleed Bin Talal Bin Abdulaziz Alsaud Center for American Studies and Research (CAASR) Conference America in the Middle East / The Middle East in America, December 2005, Beirut.


“Redemptive Technologies II: the sequel (a decade later)” abstract and paper. refereed

“Real (e)State: on the continuing reinvention of downtown Beirut,” “Authenti-city,” “Colonial Anomalies: Cuban cities and the presumed order of Spanish urban development.” In the proceedings of the uia World Congress XXI, July 2005, Istanbul, abstracts and three papers, refereed.

Paper Presentations


Exhibitions


“A Room with a Conversation in the Middle,” in Notes for an Art School, published and commissioned by Manifesta International Foundation and Manifesta 6 in Cyprus, 2006.


An Nahar, Beirut, February 17, 2006 “Missed Opportunities...and Missed Values.”


Leila Musf; “Istanbul as felt by...,” by invitation, Mimar Sinan University, Turkey, May 2006.

Stanton, Michael; The Order or Engineers and Architects, Beirut. “Architecture and Desire: Beirut/Venice Encounter” the work of 3rd and 4th-year students from aub with symposium and awards; June/july 2005 curated with Bernard Mallat.

Honors & Awards

Howayda Al-Harithy; Visiting Scholar, Center for Contemporary Arab Studies, Georgetown University, Washington dc.

Visiting Scholar, Center for Middle Eastern Studies, uc Berkeley (deferred do to accepting the position at Georgetown University).

Keynote Speaker, Muslim Women in the Arts, Montgomery County, Maryland, USA.

Mona Harb; Visiting Fellow, Aga Khan Program, Harvard University; launched the cooperation between the Harvard Graduate School of Design (cgs) and the aub mar/mur programs; met with faculty and students; attended lectures.


Publications & Design Work

Zeina Maasri, Zawaya: A periodical on emerging cultural production in the Arab world Diffil Editions, Beirut, (Zawaya is funded by the Ford Foundation). Publication design (with Mind the Gap)

Art direction of issue number 12-13 October 2005.

Member of the editorial board since 2002.

Design of program leaflet, flyers, and invitations for the public event: Zawaya Encounters, November 2005, Beirut.


Leila Musfy; Memories of the South, book that documents villages of the South, published by South for Construction, 2005


PROJECTS PUBLISHED OR CITED


Zeina Maasri; (2006) Awarded “Un des Plus beaux Livres Suisse 2006.” (Most beautiful Swiss Books 2005) for the book design (with Mathieu Christe, Switzerland) of: Térritoire Méditerranée, ProHelvetia Fondation Suisse pour la Culture, (Switzerland 2004). The award is offered annually by the Swiss Federal Office of Culture. Out of 403 books submitted in 2005, only 32 were selected by the jury for the annual award. The awarded books were exhibited in the Museum für Gestaltung Zürich (21May-11June 2006) and published in the Annual Award Catalogue “Die Schönsten Schweizer Bücher, 2006.”

Greetings from Beirut (eds. Maasri and Lutz Shift, Berlin 2005) was reviewed in Becherer, R. “Talking in the City.” Design Issues v. 22 no. 3 (Summer 2006) p. 74-7.


Other Academic Activity

Zeina Maasri; Iconography of Political Parties in Lebanon’s Civil War (ongoing research project) (Fall 05/06) William and Flora Hewlett Foundation Grant for a one semester paid research leave awarded by AUB for the project “Iconography of Political Parties in Lebanon’s Civil War.”

Mona Harb; Participated to the IPPD/AUB/LU research seminar “Space & Politics,” April 2006.

Curricular Changes

MUPP/MUD changes

GENERAL INFORMATION

The Department of Architecture and Design offers two graduate degrees: Master of Urban Planning and Policy (MUPP) and Master of Urban Design (MUD). The MUPP and MUD programs offer a first graduate degree to students interested in acquiring the critical skills necessary to analyze urban contexts and to formulate urban interventions in the form of projects and/or policies. The two graduate programs emphasize research skills as primary tools for teaching and learning. The graduate programs also seek to create a multidisciplinary debate among various approaches to understanding and practicing urban planning and urban design by enrolling students with different social science and design-based undergraduate degrees, as well as by hosting lectures and organizing yearly seminars that reflect on the different professions of and practices in the built environment, in addition to encouraging linkages with other schools of social science and design in and outside the University. This research-based and multidisciplinary approach to urban planning and urban design make the MUPP and MUD programs unique in Lebanon and the region where most other planning programs are structured as applied professional degrees.

PROGRAM STRUCTURE

The two graduate programs extend over two years of full-time enrollment. The MUPP track requires students to take a total of 30 credits, nine of them in a sub-discipline of specialization where planning and policy-making skills are applied. The MUD track requires

Sylvia Shorto; FEA Research Committee; A&D Slide Library, Administrator; A&D Search Committee; A&D Lecture Series Committee.


MUPP-MUD Coordination: completed the restructuring of the graduate programs in Urban Planning and Urban Design at the bort level (April 2006), in cooperation with Mona Fawaz.

Organized 3 field trips as part of the graduate core course “Planning and Design Workshop,” fall 2005.

Assisted the Architecture studio led by Habib Debs and Rana Haddad on the theme of public spaces, in cooperation with Solidere, spring 2006.

Organized four guest lectures as part of the graduate elective “Development Aid in the MENA Region.” [Dr. Susan Razzaz, World Bank; Walid Bakhos, Un. of Montreal; Sibylee Bikar, EU, Prof. Sari Hanafi, AUB], spring 2006.

Organized one working seminar as part of graduate core course “Thesis Preparation,” with Prof. Najib Hourani (Ivy) and Prof. Maha Abdelfrahman (AUC), spring 2006.


Wald Sadek; A&D Search Committee, Academic Search Committee for the Department of Fine Arts and Art History.


Mona Fawaz: April 2006 Seminar “D’initiation a la Recherche, one week research meeting co-organized with the Institut Français du Proche Orient, included our graduate students who presented their research work and received feedback from a number of university professors and researchers (several coming from major research centers in France).

four | Academics

Curricular Changes

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PROGRAM STRUCTURE

The two graduate programs extend over two years of full-time enrollment. The MUPP track requires students to take a total of 30 credits, nine of them in a sub-discipline of specialization where planning and policy-making skills are applied. The MUD track requires
students to take a total of 53 credits, 12 of them in applied design studios. The two tracks share a common core of 21 credits consisting of three core courses (Research Methods; Planning Theory and Policy; and Urbanism), one planning/design workshop and a final Thesis. The thesis necessarily involves empirical research and generates innovative ways of thinking and understanding the future context of practice. In addition, all students enrolled in the MUPP / MUD programs are required to take the zero-credit seminar entitled City Debates at least twice during their university enrollment. One of the core courses, Urbanism, could be waived, depending on the student background and upon the consent of the academic advisor.

**Common core MUPP /MUD**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>URPL 660</td>
<td>City Debates Seminar</td>
<td>0</td>
</tr>
<tr>
<td>URPL 630</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>URPL 631</td>
<td>Introduction to Planning</td>
<td>3</td>
</tr>
<tr>
<td>URPL 632</td>
<td>Urbanism</td>
<td>3</td>
</tr>
<tr>
<td>URPL 661</td>
<td>Planning and Design Workshop</td>
<td>6</td>
</tr>
<tr>
<td>URPL 680</td>
<td>Thesis Preparation</td>
<td>0</td>
</tr>
<tr>
<td>URDS 603/URPL 681</td>
<td>Urban Planning/Urban Design Thesis</td>
<td>6</td>
</tr>
</tbody>
</table>

Total 21 credit hours

**MUPP courses**

MUPP students are required to take three courses from one area of concentration (9 credits), in a field of applied social sciences or engineering (such as sociology, economics, public administration, civil or environmental engineering) leading towards concentration areas such as urban policy, community development, transportation, labor, housing, or environmental sustainability. Other options may be agreed upon with the MUPP/MUD academic advisor.

**MUD courses**

MUD students are required to take one design studio and two approved electives (12 credits).

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>URDS 602</td>
<td>Design Studio</td>
<td>6</td>
</tr>
<tr>
<td>Two approved electives</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

Total 12

**Program Agenda**

The typical course load for the Urban Planning and Policy and Urban Design tracks is normally distributed over two years as shown below. Course distribution is subject to the approval of the academic advisor.

**Urban Planning and Policy Track**

**First Year**

**Fall Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>URPL 630</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>URPL 631</td>
<td>Intro to Planning Theory and Policy</td>
<td>3</td>
</tr>
<tr>
<td>1 Concentration Area Elective</td>
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<td>3</td>
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</table>

Total 9

**Spring Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>URPL 632</td>
<td>Urbanism</td>
<td>3</td>
</tr>
<tr>
<td>URPL 661/URDS 601</td>
<td>Planning &amp; Design Workshop</td>
<td>6</td>
</tr>
<tr>
<td>URPL 660</td>
<td>Seminar</td>
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Total 9

**Second Year**

**Fall Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>URPL 680</td>
<td>Thesis Preparation</td>
<td>0</td>
</tr>
<tr>
<td>2 Concentration Area Electives</td>
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<td>6</td>
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</tbody>
</table>

Total 6

**Urban Design Track**

**First Year**

**Fall Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>URPL 630</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>URPL 651</td>
<td>Intro to Planning Theory and Policy</td>
<td>3</td>
</tr>
<tr>
<td>1 Approved Elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Total 9

**Spring Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>URPL 632</td>
<td>Urbanism</td>
<td>3</td>
</tr>
<tr>
<td>URPL 660</td>
<td>Seminar</td>
<td>0</td>
</tr>
</tbody>
</table>

Total 9

**Second Year**

**Fall Semester**

<table>
<thead>
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<th>Course Name</th>
<th>Credit Hours</th>
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<td>6</td>
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<td>1 Approved Elective</td>
<td></td>
<td>3</td>
</tr>
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</table>

Total 9

**Spring Semester**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>URPL 660</td>
<td>Seminar</td>
<td>0</td>
</tr>
<tr>
<td>URDS 603</td>
<td>Urban Design Thesis</td>
<td>6</td>
</tr>
</tbody>
</table>

Total 6

**Admission Qualifications**

Applicants who meet all AUB and Fea regulations governing admission to graduate study (including acceptable EEB or TOEFL scores) and who hold the equivalent of a graduate degree in architecture, landscape architecture, environmental design, urban or regional planning, engineering, economics, public administration, or sociology or other social science degrees may be admitted to the Master of Urban Planning and Policy program as regular graduate students.

Applicants who meet all AUB and Fea requirements governing admission to graduate study (including acceptable EEB or TOEFL scores) and who hold the equivalent of a professional Bachelor of Architecture degree may be admitted to the Master of Urban Design program as graduate students.

For admission purposes, the cumulative undergraduate average of all students, regardless of undergraduate major, will be computed over all courses taken during the last two years of undergraduate study. If the credit total for all courses taken during the last two years is fewer than 60 credits, courses from previous semesters will be considered until this number is at least 60.

**New Courses**

**NEW CORE COURSE IN GRAPHIC DESIGN**

GROS 231: Introduction to Visual Theory (3 credits)

The course is an introduction to the various debates concerning visual representation aiming towards an investigation of the visual as a social practice and as part of an aesthetic discourse.

**NEW ELECTIVE COURSES**

GROS 030: Signs of Conflict and Resistance (5 credits)

The course addresses the deployment of political rhetoric in graphic design historically and in contemporary practice. It examines those particular moments of political conflict - war,
resistance and revolve, where visual artifacts in different print formats become important vehicles through which ideological constructions are materialized and diffused. The course takes as a case study the graphic production of Lebanese political parties and movements during the civil war (1975-1990) while covering other significant cases that can enrich and inform our main investigation.

ARCH 020: Beirut Modern (3 credits)
The course investigates modern architecture in Lebanon, mainly in the 1950s and 1960s, shedding light on a vibrant period that produced a distinctive local version of modernism. The course covers aspects such as architectural education, the organization of the profession, patronage, competitions, collaborations, and the various meanings given to modernity and tradition.

ARCH 050: Writing the Manifesto (3 credits)
We need to write the manifesto. It will clarify and articulate our design philosophy, explicate the active role of design in the social field and connect the practice with the philosophical question of being a creator. For inspiration we will be looking at a variety of manifestoes produced in the fields of literature, music, cinema, poetry, theater... In a workshop format, we will individually write our own manifesto, refine it, critique it and present it to a live audience.

URPL 627: Spatiality of Urban Social Exclusion (3 credits)
Social exclusion is a contested term. It appears to have originated in France in the late 70’s to denote those excluded from the welfare state safety net (“les eclus”). Today the term “social exclusion” is associated with the change in the nature of the condition of deprivation, particularly in the urban context, from material insufficiency, i.e. poverty, to the inability to exercise social, economic and political rights as citizens. The first part of the course examines the meaning of the term, the extent and nature of problems that it encompasses and the controversies about its measurement. The second part of the course investigates the “spatiality of social exclusion” (Madanipour, 1998). It seeks to provide an understanding of both, the translation of social exclusion into space and the manner in which space can promote social exclusion. The third part of the course focuses on how urban regeneration and housing initiatives impact social exclusion and the implications of social and spatial exclusion on citizenship.

GROS 053: Advanced Arabic Typography (3 credits)
In addition to a new and summarized historical overview, the study of Arabic calligraphy involves dealing with the problems facing this traditional art in its efforts at modernization, innovation and adaptation to new technologies. This consists of two approaches to the subject, one that looks at the Arabic script as an art by itself: calligraphy, and the other that explores its reformist and mediacal function. This will be illustrated by means of some case studies from the modern period.

ARCH 067: Architectural Programming (3 credits)
The course will deal with Architectural Programming in the context of pre-design, in both the conceptual and the practical aspect of the topic. Pre-design, the program and architectural programming will become the sequence in which we will introduce the following: pre-design information collection and understanding, concept of program, programmatic issues and analysis, scales of programmatic applications and different ways of thinking needed in the early design process.

GROS 040: Digital Media for the Web (3 credits)
This course introduces students to web design and publishing, through interface design and data organization and visualization. Students will learn Macromedia Flash and Dreamweaver to create community based websites that explore new ways of publishing, exhibiting, and sharing information on the Internet. Students will be working both on animation and interactive programming to create complete web projects.
Ogden-Smith, Anna; “Erotika—Featuring: Christina [Modern Mythologies]”

Shaaban, Sara; “On Display”

Siklas, Alina; “La Notion de l’Artiste Fou; Monologue et Reflexions”

Sunna’, Ziad; “In Memory of…”

Tabrouni, Hima; “Still Life”

Yakan, Mariam; “Dialogues on a Natural High: A Process in the Moving Circa”

Masters in Urban Design

Summer 2005

Azzam, Youseff; “Housing Migrant Workers in the City: An Investigation of Urban Design Regulations in an Informal Settlement of Beirut”

Quomi, Nasir; “Reclaiming the Public Domain: The Case of Ramlat al-Bayda Public Beach” Spring 2006

Samimfam, Chadi; “Sector 27. Rue 52, Conflicting Land Use in Monot Street”

Shibli, Rabih; “Revitalizing al-Mina st. in the Old Town of Sour”

five | Departmental Activities

Lectures & Presentations

Michael Irving Jensen; “Introducing Images of the Middle East 2006,” October 3, 2005

Michael I. Jensen is head of Middle East Projects at the Danish Center for Culture and Design (DCCD), which was planning a major culture festival called “Images of the Middle East” taking place in summer 2006 in Copenhagen and other major Danish cities. Jensen presented the project: “Images of the Middle East” which focuses on contemporary culture and the current changes which are taking place in the Middle East.


The lecture introduced a new technique of working and performing digital arts, which is real time interaction. It is a technique that focuses on using computers in live situations to play music, to generate image or make a performance.

Eduardo Souto de Moura; “Recent Projects,” October 24, 2005.

Eduardo Souto de Moura studied architecture at the School of Fine Arts in Oporto, Portugal, where he later became a professor. He has also been a visiting professor at Harvard, Geneva, Paris-Belleville, ETH Zurich, Lausanne, and Dublin. He has completed numerous residences, infrastructural work, and other projects in Portugal and Europe, including the Portuguese Pavilion for the 2000 Expo in Hanover, with Alvaro Siza. He has won numerous awards. The Souto de Moura sports stadium completed in 2004 is carved out of a granite hillside in Braga, Portugal, using the excavated material for aggregate in the building’s concrete structure.


Aloys Lolo was born in Bern, Switzerland. He has been a professional illustrator since 1978. Aloys has collaborated with several French and Swiss publishers, and has held exhibitions of his work in Switzerland and the United States. He has worked on many posters and projects for cultural and political awareness. In the area of fiction, his most known characters are “Qickett” & Flupkette” which were published in sixteen newspapers and magazines. Among his publications: La peau des Rhés, Ed. Magic Strip, Bruxelles 1985; Juliette et Roméo, Pro Juventute, 1993; Toxicodépendance: Problèmes somatiques courants, Ed. Médecine & Hygiène, 2004.


Screening of the video: “Un Cercle autour du Soleil.”

Ali Cherni showed his most recent work and focused on the power and tools he as a designer has in creating images, and he discussed his responsibility as an author. He graduated from the Department of Architecture and Design in June 2000.


Mina’s sister Mina Kaddoura was born in Alexandria and raised between Toronto and Beirut.

She studied design at aub where she earned a Bachelor in Graphic Design in 2000. She trained in Amsterdam and New York City then went for her MFA in Art Direction at vcu Adcenter. After graduation, she was hired by Wieden+Kennedy in Portland, Oregon. Major projects she has worked on are: Oregon Tourism, Belvedere, Powerade and Coke. She is currently working on the Nike campaign for football 2006. Her work has won international and national awards. She was featured in Communication Arts, Win Awards and One show.

She was recently voted as “The Best Creative You Don’t Know” in Adweek Magazine. She will also be featured in a book called “Branding and Advertising Today” to be released early 2007.


Natasha Iskander will be an Assistant Professor at the Wagner School beginning in fall 2006. She has a PhD in Management from Massachusetts Institute of Technology. She is currently a post-doctoral fellow at NYU’s International Centre for Advanced Studies as part of the Authority of Knowledge project. Her research interests include labor migration and its relationship to economic development, labor mobilization and its relationship to work force development, and processes of institutional innovation and organizational learning. Recent work includes a study comparing the processes by which the governments of Mexico and Morocco elaborated policies to build a link between labor emigration and local economic development.


Office d’A is a Boston-based architecture and design firm led since 1991 by principal partners Monica Poncione de Leon and Nader Tehrani. The firm’s work ranges in scale from furniture to urban design and infrastructure, with a focus on architecture.

Office d’A’s simultaneous rigor and sensitivity have allowed the firm to develop a portfolio of projects around the world—from Boston to Caracas to Beijing—which uniquely marries local craft and tradition to global and contemporary techniques.

Nader Tehrani is a principal of Office d’A. He is currently serving as the Thomas W. Ventulett III Distinguished Chair in Architectural Design at the Georgia Institute of Technology and is an Adjunct Associate Professor of Architecture at the Harvard Graduate School of Design, where he has taught since 1998. At the gsd, Tehrani co-taught and coordinated the Immaterial/Ultra-materiel seminar and exhibition. Tehrani has served on numerous juries and lectured widely throughout the Americas, Europe, and Asia. Tehrani has previously taught at the Rhode Island School of Design, University of Miami, and Northeastern University. He received the BFA and MArch from the Rhode Island School of Design and the MArch from the Harvard Graduate School of Design. He also attended a Post-graduate program at History and Theory at the Architectural Association in London.


Philippe Sonnollet is an anthropologist, chargé d’enseignement au Centre de Recherches et d’Etudes Anthropologiques (crea) de la Faculté de Sociologie et d’Anthropologie de l’Université Lumière Lyon II. His research concentrates on several geographical locations mainly Brazil and Cuba.


Bill Hill is president and founding partner of MetaDesign. MetaDesign creates identities, interfaces and environmental graphics for clients from cultural institutions to global corporations. “We create value through the development of proven communication tools and experiences, and we succeed because we have deep industry knowledge and experience, a global perspective, and a user-centered approach.” MetaDesign helps clients communicate with their audiences by solving information design problems in three key areas: identity design, interaction design and environmental design. Clients include: Apple Macintosh, Audi, Denver Art Museum, Palm, Xerox and Nike.

Having launched six television channels in the last four years, Obeida Sidani (aub Graphic Design graduate 1997) has played a major role in today’s Middle Eastern broadcast scene. He currently oversees the on-air/off air branding of four television channels: Dubai Television, Affective Turbulence: The Art of Open Systems; the curatorial research project “Xeno_Tech” which researches situated practices of media (art) in the Middle East. Projects in 2005 include the exhibition infrastructures involving sound artists and architects, and Xeno_Sonic: a series of experimental sound performances from the Middle East. Nat has taught media theory and electronic art at the Willems de Kooning Academy in Rotterdam and at the Lebanese American University in Beirut.


Olivier Philippe, Landscape Architect and Artist, is one of the three founders of Agence ter Paysagistes - Urbanistes, based in Paris, Karlsruhe and Guayne. He teaches at the École Nationale Supérieure du Paysage in Versailles. The firm works on a wide range of projects and has been awarded several times in international competitions. Agence ter approaches the transformation of space by taking into account the context of the intervention in all its complexity. The intrinsic qualities of a particular place and its potential, and the surrounding economic, social and political concerns are interpreted within a total concept, whatever the scale of the intervention. This conceptual approach makes it possible to federate and direct the future of the site. Water, layers (stratums) and horizons are recurrent themes in the work of Agence ter which underlie the manipulation of space and are interpreted in varying forms and orientations within the differing realizations.


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Forums, Exhibitions & Workshops

AGA KHAN 2005
Organized in collaboration with the Aga Khan Trust for Culture, the event was part of a traveling forum involving Alexandria, Amman, Beirut, Cairo, Istanbul, Sharjah and Toronto. November 11, 2005.

A two film on the last cycle of the Aga Khan Award for Architecture was shown. A panel/debate took place followed by a reception. It closed with a lecture by Farshid Moussavi who is Principal, Foreign Office Architects, London. Farshid Moussavi is an architect of Iranian origin. She worked with the Renzo Piano Building Workshop in Genoa and the Office for Metropolitan Architecture in Rotterdam prior to establishing Foreign Office Architects in London in 1992. Professor Moussavi is currently the head of Institute of Architecture at the Academy of Fine Arts in Vienna and has been teaching there since 2001. The built projects of Foreign Office Architects (foa) include a new ferry terminal with landscaped public areas and cruise liner facilities in Yokohama, Japan; a new park with outdoor auditoriums in Barcelona; and a police headquarters in La Villa Joya, Spain. foa’s work is widely exhibited and published in numerous monographs and catalogues, Farshid served as the chairperson on the 2004 Aga Khan Award for Architecture Master Jury.

EXHIBITIONS
Miriam Kaddoura: Selection of her print work and TV reels.

FPOU FFA DISTRICT COMPETITION
A Public Exhibition for the winning design and competing schemes in the limited international design competition for the Faculty of Engineering and Architecture District and Iragi Oxy Engineering Complex was held in the Department of Architecture & Design from May 18 till June 1, 2006.

GD 10TH ANNIVERSARY
Selection of print works, books, tv graphics, and animations etc. from alumni of the past ten years working in the profession.

WORKSHOP
Bill Hill: a two day workshop in corporate identity open to 3rd and 4th year Graphic Design students.

CONFERENCES
Cities and Globalization: Challenges for Citizenship

CITY DEBATES 2006

[i] High-End Development in Context
Mona Harb; welcome address
Tawwaz Traboulsy; “The Oligarchy and the City: a Historical Background”
Najib Hourani; “Who is Looking at You, Kid? Navigating the Scopic Regimes of the Information Age”
Fawwaz Traboulsi; “The Malling of the Middle East?”
Doris Summer & Karim Eid-Sabbagh: “The Production and Imaging of ‘Dream Homes’ for the Afloat in and around Beirut”

[2] Dwellings and Retail for the Afloat
Nina Alaily-Mattar; “Towards an Urban ‘Ai’zone?’ Detachment and Concentration in Networked Nodes of Affluence”
Maha Abdelrahman; “Islamic Consumerism for the Rich in Cairo”
Discussant: Zena Maasi

[4] Public Spaces, Consumerism & Citizenship
Mona Abaza; “Consumer Culture and the Urban Reshaping of Cairo”
Angus Gavin (Solidere); “Beirut: Emerging Places”
Discussant: Khaled Saghieh

Samir Khalaf; “On the Pathologies of Consumerism in Postwar Beirut”
Hashim Sarkis; “Intense Edges, Open Spaces”
Discussant: Heiko Wimmen

Roundtable: Researching High-End Development with: M. AbdelRahman, N. Alaily-Mattar, N. Hourani, moderator: M. Harî

Event
10 years of graphic design graduates. Events were held between June 19 and June 21, 2006.

An exhibition opened on June 19, 2006 in the Department of Architecture and Design. The exhibition entailed our graduates’ professional design projects ranging from print to multi-media. Lectures were presented by graduates on June 20 and June 21. The following lectures were presented by graduates on June 20 and June 21:

Zena Khalil; “In my world of pink, I am queen of my Casbah”
Lynne Osman; “Arabic Calligraphy alternating between the global and the local”
Diala Ashkar; “Speep and the web designer”
Tarek Atrissi; “the designer as entrepreneur”
Marie-Joe Raidy; Lena Merhej and Youmna Saba; “The other”

Nathalie Fallaha; “Visualizing cultural identity; Beirut typographic expressions”

Marie-Joe Raidy; “the printing press”

On June 21, 2006 a gala dinner was held at the Sporting Club in Manara. Graduates from all years, Dean Hajj and his wife, faculty and staff were present.

six | Students

Enrollment

**ARCHITECTURE**

<table>
<thead>
<tr>
<th>Year</th>
<th>Students</th>
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</thead>
<tbody>
<tr>
<td>1st year</td>
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<tr>
<td>2nd year</td>
<td>36</td>
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<tr>
<td>4th year</td>
<td>19</td>
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<tr>
<td>5th year</td>
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**GRAPHIC DESIGN**

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</thead>
<tbody>
<tr>
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<tr>
<td>3rd year</td>
<td>26</td>
</tr>
<tr>
<td>4th year</td>
<td>34</td>
</tr>
</tbody>
</table>

**MUPP/MUD**

13

Student Activities

**FIELD TRIPS**

Sylvia Shorto; Field trip for second and third year students who had successfully completed ARCH 224 to New York City, June 19-30, 2006.

**Awards**

FAWâl W. Azar Architectural Award
5 students were nominated (Architecture class of 2007):
El Ak, Hala; Akkaoui, Stephanie; Joueidi, Riwa; Naim, Candice; Maatouk, Rayan.
On Thursday June 22, 2006 Mr. Azar announced the winners:
Akkaoui, Stephanie (70% of the award)
Naim, Candice (30% of the award).
one | Introduction

During the period from July 1, 2005 to June 30, 2006, the Department of Electrical and Computer Engineering witnessed exciting developments in terms of strategic planning: the development of a new undergraduate program in electrical and computer engineering (ECE), and new graduate programs, which include non-thesis and thesis programs, and a program information and communications technology (ICT), and the finalization of preparations for launching the PhD program.

The strategic plan of the Department for the next five years was developed with initiatives evolving around six themes: students, faculty, graduate programs, support for department administration, and public relations. The student initiatives emphasized involving students in projects, research, and community work; attracting top students at the undergraduate and graduate levels, and enhancing their educational experience in the department, and improving regional diversity in the student body, especially at the graduate level. Faculty initiatives support fostering links with industry and funding agencies, forming research groups in the department, offering continuing education courses, reducing the teaching load, creating endowed chair positions, and appointing an external relations officer. For undergraduate programs, the initiatives call for replacing the BS in electrical and computer engineering: launching new undergraduate programs in software engineering and biomedical engineering; adapting to changing market needs, and obtaining ABET accreditation. The initiatives for graduate programs include improving the existing programs and introducing an ME in electrical and computer engineering, offering a non-thesis option, launching the ICT program and the PhD program, and developing a graduate program in software engineering. At the level of department administration, the initiatives consist of continuously upgrading equipment and labs, hiring two staff members for laboratories and software support, improving collaboration with the Department of Computer Science at AUB, and positioning the department to be a research and development center in the region. Publicity initiatives propose creating a task force for publicity, upgrading the website of the department (a new ECE website was launched in June 2006), creating print and multimedia material to publicize the department, visiting high schools and universities to recruit undergraduate and graduate students, and fostering links with alumni of the department.

During the period covered by this annual report, and as a result of the strategic planning effort, the department introduced a new undergraduate degree, Bachelor of Engineering in Electrical and Computer Engineering that replaces the existing Bachelor of Engineering degree in Electrical Engineering. The undergraduate curricula in the two programs in the department (ECE and CCE - Computer and Communications Engineering) were studied during the departmental retreat in November 2005. The programs underwent a major revision that streamlined them and aligned them together. As a result, ECE is a general program and CCE is a specialized program for students who intend to take electives in computer hardware, software, communications, and networks.

The master of engineering degrees in ECE and ICT were merged into one new degree, the Master of Engineering in Electrical and Computer Engineering. Under this new degree, three graduate programs will be offered as of September 2006: A research-oriented thesis program, a course-oriented non-thesis program, and a special program focused on information and communications technology (ICT). The ICT program is a special program in the sense that students following the ICT curriculum will have to complete all the requirements of a thesis program in addition to taking courses in business and management, and completing an industrial or research internship. The development of the ICT program is funded by the European Commission under Tempus grant TEP15203-2003 with the Munich University of Technology (TUM) in Germany, the University of Southampton in the UK, and Siemens as being partners in this project. As part of the agreement with TUM, an intensive course on optical communications was offered in the department during April 2006. The experience was very positive and encourages the offering of such courses in the future. External links, similar to those with the TUM partners, are being extended to ENST in France, Delft University in the Netherlands, and the DARM German agency.

The PhD program in electrical and computer engineering underwent further study by various university committees. The PhD program was approved by the AUB Board of Trustees in June 2006. A visiting team of scholars recommended to the New York State Department of Education the registration of the PhD degrees from AUB. The program is slated to start enrolling students in September 2007.

Development of the laboratories continues to be a priority in the department, using funds from Tempus, ASHA, and the university. New laboratories for radio frequency and wireless communications, mobile and distributed computing, and biomedical engineering, are being equipped, and upgrades to the communications laboratory and the power electronics laboratory were installed.

The department continued to advertise faculty positions in various areas, for which more than sixty applications were received. Dr. Imad Elhajj will join the department in September 2006 as a new assistant professor. Dr. Elhajj graduated from the department with a BS in ECE in 1997. He then went on to receive an MS and PhD in electrical engineering from Michigan State University. After receiving his PhD, he joined Oakland University as an assistant professor of computer science and engineering.

Finally, congratulations go to Dr. Hassan Attal who was promoted in June 2006 to the rank of Associate Professor, and to Dr. Adnan Al-Alaoui who was elected chairman of the newly-established 1st Lebanon Section, and a warm welcome is extended to Ms Samiha Tannir who joined the department as secretary in the fall of 2005.

Ayman Kayssi; Chairman.

two | Personnel

Full-Time Faculty

PROFESSORS

Al-Alaoui, M. Adnan; PhD, Georgia Institute of Technology; Areas of interest: Analog & digital signal processing with applications to filters, communications, controls, and biomedical engineering; pattern recognition and neural networks with applications to character, speech, and image recognition.

Chaaban, Farid; PhD, University of Liverpool; Areas of interest: Design and analysis of electric machines and drives; energy systems and their impact on the environment; air pollution from power plants.

Chehid, Riad; PhD, University of London; Areas of interest: Design and analysis of electric machines and drives; energy systems and their impact on the environment; air pollution from power plants.

Diab, Hassan; PhD, University of Bath; Areas of interest: Performance evaluation of parallel processing systems; application of fuzzy methodology to performance evaluation in parallel processing systems; performance evaluation of computer architecture and systems; simulation for engineering education.

El-Hajj, Ali; Docteur Ingénieur, University of Renne I; Areas of interest: Antenna theory, electromagnetic field computations; software development; telecommunication applications.

Hajj, Ibrahim; PhD, University of California, Berkeley; Areas of interest: Design and verification of VLSI circuits and systems; design for reliability and optimization; design automation; mixed-mode simulation; fault simulation and testing.

Kabalan, Karim; PhD, Syracuse University; Areas of interest: Antenna theory; electromagnetic field computations; software development; telecommunication applications.

Karaki, Sami; PhD, University of Manchester; Areas of interest: Renewable energy systems modeling; generation expansion planning and production costing; application of neural networks, fuzzy systems, and genetic algorithms in energy systems.

Kayssi, Ayman; PhD, University of Michigan; Ann Arbor, Areas of interest: Internet technologies; wireless applications; computer networks and data communications; VLSI design, modeling and simulation; digital system testing.

Mead, Faud; PhD, Purdue University; Areas of interest: Control; robotics; industrial automation; instrumentation.

Saade, Jean; PhD, Syracuse University; Areas of interest: Communication systems; fuzzy sets and logic; design of intelligent systems using fuzzy logic and other tools; optimization techniques for intelligent and decision-making systems.
Sabah, Nassir; PhD, State University of New York at Buffalo; Areas of interest: Electrophysiology of nerve and muscle; modeling of the electrical behavior of nerve and muscle cells; modeling of the behavior of the human neuromuscular system.

ASSOCIATE PROFESSORS
Ali-Ahmad, Walid; PhD, University of Michigan, Ann Arbor; Areas of interest: Millimeter-wave 4G radio systems, multi-mode multi-band reconfigurable radio front-ends, digital radio transceivers for 5G systems, RF MEMS, applied EM applications

ASSISTANT PROFESSORS
Abou Faycal, Ibrahim; PhD, Massachusetts Institute of Technology; Areas of interest: Information theory; digital communication; optical communication; stochastic systems.

Artail, Hassan; PhD, Wayne State University; Areas of interest: Distributed computing and clusters; high-availability, real-time software over networked systems; embedded systems and smart sensors; communication protocol design; software project management and rollout.

Bazzi, Louay; PhD, University of North Carolina at Charlotte; Areas of interest: Correcting codes; design and analysis of algorithms; cryptography; number theory.

Chehab, Ali; PhD, University of North Carolina at Charlotte; Areas of interest: VLSI design and design for testability (DFT); dynamic power supply current (DPC) testing; development of automatic test pattern generation (ATPG).

Daww, Zahir; PhD, University of Munich; Areas of interest: Wireless communications (CSMA/EDCA, UMTS); Hybrid Cellular Ad Hoc Networks Multiple User Information Theory; multimedia transmission over IP networks; bioinformatics and statistical genetics.

Kamar, Fadi; PhD, Massachusetts Institute of Technology; Areas of interest: System identification and control; biological systems: neural system modeling, gene expression arrays.

Mansour, Mohamad; PhD, University of Illinois at Urbana Champaign; Areas of interest: Digital IC design; VLSI for communications, signal processing and general purpose computing systems; coding theory, code design on graphs, decoding algorithms and architectures; algorithm architecture optimizations for VLSI using abstract algebra.

Saghir, Mazen; PhD, University of Toronto; Areas of interest: Computer architecture; optimizing compilers; configurable computing; embedded systems design.

Sahar, Akram; PhD, Virginia Polytechnic Institute

Drif, Taibeh; PhD, University of Michigan

Karameh, Fadi; PhD, State University of New York, Buffalo; Areas of interest: Electrophysiology of nerve and muscle; modeling of the electrical behavior of nerve and muscle cells; modeling of the behavior of the human neuromuscular system.

Part Time Faculty

Chahine, Hazem; Diploma, Loughborough College of Technology

Lecturers

Abou Chahine, Soubhi; PhD, ENST

Chehab, Toufic; D.E., ENST Paris

Daham, Lai; PhD, London South Bank University

Hamadi, Lama; PhD, Ohio State University

Mehdi, Mahmoud; Ms, Marquette University

Mohrabi, Issam; PhD, Essex University

Mohr, Tann; MS, University of Prague

Othman, Ziad; PhD, University of Florida

Tannir, Mauzam; PhD, Imperial College, London

Visiting Lecturers

Huiger, Ernst; PhD, University of Florida

Instructors

Barake, Tahb; MSC, Virginia Polytechnic Institute

Driba, Chassan; ME, American University of Beirut

Gurumian, Mihran; ME, American University of Beirut

Hashimi, Haitham; MS, Boston University

Kanafani, Zahe; BE, American University of Beirut

Mokalled, Ali; MS, Western Michigan University

Slim, Bassel; ME, American University of Beirut

Staff

Director

Mr. Rabab Abi Shakra and Mrs. Samiha Tannur Issawi

ECE LABS

M. Khaled Joujou, Salam Abyad and Fuad Shihab.

External Advisory Board

The External Advisory Board (EAB) plays an important role in advising, promoting, and supporting the ECE department. The EAB met on June 14, 2006. Included on the agenda of that meeting was: State of the ECE Department; Strategic Plan; New Programs in ECE and Other Business.

External Advisory Board Members

Mr. Chassan Boulib; Liban Cables; Mr. Jalal Fawwaz; ACT; Mr. Zuhair Haddad; CCC; Mr. George Kadif; MIM; Mr. Kamal Kalot; Tamer Fressen; Dr. John Mahloul, MIM; Mr. Yousef Matar; Dar Al-Handassah (Chairman of the EAB); Mr. Abude Omari, Pillar Invest; Mr. Abdel Raouf Rifai; Mr. Hussein Rifai; MDC; Dr. Gabriel Rebeld; University of California, San Diego.

Teaching

Abou-Faycal, Ibrahim; Fall: ECE 442 [40]; ECE 641 [14]. Spring: ECE 442 [56].

Al-Alaoui, Mohamad Adam; Fall: ECE 314/440, ECE 691C [24]. Spring: ECE 440 [26].


Bazzi, Louay; Fall: ECE 230 [16]. Spring: ECE 250 [40]. ECE 431 [7]. ECE 642 [7].

Chabani, Farid; Summer: ECE 470 [23]. Fall: ECE 570 [50]. ECE 370 [40]. Spring: ECE 470 [58]. ECE 652 [27].

Chedid, Ria; Summer: ECE 210 [12]. Fall: ECE 480 [40]. ECE 684 [10]. Spring: ECE 210 [50]. ECE 480 [40].


Daww, Zahir; Fall: ECE 640 two sections (38+42). Spring: ECE 450 two sections (53+63).

Diab, Hassan; Summer: On Leave; Fall: On Leave; Spring: On Leave.


ECE 330 [27].

Kabalan, Karim; Summer: ECE 440 [26]. Fall: ECE 210 [50]. ECE 670C [7]. Spring: ECE 210M [50]. ECE 674 [9].

Karaci, Sami; Fall: ECE 310 [50]. ECE 471 [37]. Spring: ECE 473 [25]. ECE 641 [10].

Kamar, Hadi; Fall: ECE 210 [25]. Spring: ECE 635 [8]. Spring: ECE 440 [43]. ECE 650 [28].

Kashy, Ayman; Fall: ECE 311 [49]. Spring: ECE 311 [21]. Chairman of Department.

Mansour, Mohamad; Fall: ECE 320 two sections (33+38). Spring: ECE 321 two sections (51+56). ECE 623 [5].

Mrad, Fuad; Fall: ECE 460 [83]. ECE 630 [14]. Spring: ECE 460 [43]. ECE 675 [16].

Saade, Jaouad; Summer: ECE 442 [33]. Fall: ECE 661C [8]. ECE 664C [18]. Spring: ECE 440 two sections (33+35). Coordinator of the Final Year Project.

Sahab, Nassir; Fall: ECE 310 [44]. Spring: ECE 605 [8]. Spring: ECE 210 [50]. ECE 602 [8].

Coordinator for ECE 401 seminar.

Saghir, Mazen; Fall: ECE 421 [50]. ECE 625 [10]. Spring: On Leave.

Grants

M. A. Al-Alaoui; U.B. Electronic Diagnostic System for Heart Disease US 2,000,000.


TEMPUS: Establishing a graduate program in Information Technology (RT) 494,000.

Euros/8 ECE faculty members / 3 years.

Euros/8 ECE faculty members / 3 years.
Kadifah Fund: Adult Literacy Using Information Technology us $25,000.

W. Ali-Ahmad; ukr grant, $6,000, 1/1/05-9/30/06.

(june 11/06-june 13/06) To attend and present at the 2006 IEEE RFID Symposium. Grant includes airline ticket, $290 registration fee, and a per diem for 4 days (x $225=$900).


H. Artail; George Kadifa Fund, $12,000, December 2005, Knowledgebase Development for Mobile Environments.

Mediterranean Virtual University (mvvu) project, $200,000 (member of a group to develop and deliver online courses).


Grant to attend the 3rd International Symposium on Telecommunications (ist 2005), Shiraz, Iran.


Aub Energy Audit, ergc group, requested and funded by Aub President, $89,000, starting March 2006.


Submitted jointly with the University of Mannheim, Germany and evaluated by the eu. The proposal has been approved by the eu and it is expected to start in Sept. 2006.

Value: $1.6 million.


A. Chehab; George Kadifa Research Fund. An Enterprise Policy-Based Security Architecture for Protecting Relational Database Network Objects ($ 6,500) (with Prof. Ayman Kayssi).

National Council for Scientific Research, Lebanon. Trustworthy Distributed Computing (ll 7,000,000) (with Prof. Ayman Kayssi and Prof. Hassan Artail)


Mediterranean Virtual University (mvvu); eu project to develop online courses [200,000 Euro] with Profs. Artail, El-Hajj, Kabalan and Kayssi.


Hewlett Foundation junior faculty research leave grant for spring 2007.

Approved activity: Attend the ieee International Conference on Communications (icc’06) in Istanbul, Turkey / Duration: June 11-16, 2006.


"Mediterranean Virtual University," tumerd, Amount of about $4,000,000, $500,000 for Aub.


S. Karaki; Energy Access II Project, The Global Network of Energy for Sustainable Development, $25,000, contributing to the activity in collaboration with other ergc group members.

Renewable Energy Technologies II, The Global Network of Energy for Sustainable Development, $25,000, contributing to the activity in collaboration with other ergc group members.

Unit Commitment Problem Using Lagrangian Relaxation and Evolutionary Programming, in collaboration with Dr. K. Khidir from the em Group, $6,000 (estimated), October 1, 2004 to September 30, 2005.


F. Karameh; ukr Grant, Experimental testing of the Neurophysiological Basis of Oscillatory Cortical Dynamics-Towards a Brain Computer Interface.

Visiting Scientist, Laboratory for Information and Decision Systems, mit, July 2005 fpa Dean funding.

Attended the IEEE EMBS Conference in Shanghai, China, Sept 2005.

M. Mansour; Mr. George Kadifa, $6,500 fund for a project on “A Universal Wireless Data Modem,” (joint work with other faculty members).

National Instruments, $32,000 grant in the form of research equipment and design toolkits.


lncsr, 6,250,000 LL (extended to 2006).


Publications

BOOKS, BOOK CHAPTERS, AND JOURNAL PAPERS


H. Artail and E. Kahale


H. Artail and M. Raydan


R. Hamade, H. Artail, and M. Jaber


M. Eid, H. Artail, A. Kayssi and A. Chehab


F. B. Chaaban, S. Karaki, R. Chedd, T. Mezher, A. Hamzeh, A. Yahya, and A. Harb


A. Chehab, S. Patel, and R. Makki


Z. Dawy, S. Davidovic, and A. Seeger

Z. Dawy, B. Goebel, J. Hagenauer, C. Andreoli, T. Metzinger, and J. C. Mueller

G. Derbas, A. Kayssi, A. Chehab, H. Artail, and A. Tajeeddine

M. M. Mansour and N. R. Shanbhag

M. M. Mansour and N. R. Shanbhag

F. Mard

J. J. Saade and A. Fakhri

CONFERENCE PAPERS

M. A. Al-Aloufi and J. Naoum-Sawaya, M. Slim, S. Khawam

W. Ali-Ahmad

I. Riachi, M. Mouawad, N. Abou-Naccoul, G. Khazen, and H. Artail

A. Idris, H. Artail, and H. Safa

R. Atoum and H. Artail

H. Artail, H. Safa, and S. Pierre
"Database Caching in MANETS Based on Separation of Queries and Responses," in Proc. IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob’05), Montreal, Canada, August 2005.

J. Naoum-Sawaya, B. Chaddar, S. Khawam, H. Artail, and Z. Dawy

F. B. Chaaban

B. Kaisi and A. Chehab

A. Dalghan, A. Chehab, and A. Kayssi

Z. Dawy and S. Arayssi
"Advanced Fixed Relaying in Multihop Based Cellular Networks," in Proc. IEEE International Conference on Communications (ICC’06), Istanbul, Turkey, June 2006.

E. Yaacoub, R. El Kaisi, and Z. Dawy

Z. Itani, H. Diab, and H. Artail

E. Yaacoub, K. Y. Kabalan, A. El-Haji, and A. Chehab

M. Serhan, S. Karaki, and L. Chaur

E. Huiler and S. Karaki

F. Karameh and S. Massaqoui

Y. Shaer, A. Kayssi, and A. Chehab

R. Wehbi, A. Kayssi, A. Chehab, and Z. Dawy

R. El Kaisi, A. Kayssi, A. Chehab, and Z. Dawy

W. Itani, A. Kayssi, and A. Chehab

A. Tajeeddine, A. Kayssi, A. Chehab, and H. Artail

W. Itani, A. Kayssi, and A. Chehab

M. M. Mansour

A. Smaili, F. Mard, and H. Maamoun

Z. Allassaad and M. Saghir
Congress (wrec), 2001-present. This committee is responsible for planning and organization of wrec activities such as meetings and publications.

Member of the Energy Research Group, FEA AUB, 2000-present
Member of the panel of reviewers for IEEE-Energy Conversion 2004-present
Member of the panel of reviewers for Energy - the International Journal. 2001-present
Consultant to Dhofar University (two visits), Salalah. Sultanate Oman on curricula development for the College of Engineering.

A. Chehab; Student advising (17 students)

Member, Ad hoc committee on ece Strategic Planning Committee
Secretary, Ad hoc committee on ece Undergraduate and ABET Committee
Member, Academic and Curriculum Committee
Member, FEA Library Committee
Supervisor, Multimedia Lab
Gave 2 lectures about Electricity for the ASST 200 course
Member, University Library Committee.

Z. Dawy; Advisor for undergraduate and graduate students (50 students)

Member of the ECE TEMPUS CITIP Committee (Steering committee member and financial coordinator, since Sept. 2004)
Member of the Ad Hoc ECE Graduate Committee (since Sept. 2004)
Member of the Ad Hoc ECE Recruitment Committee (since Jan. 2005)
Member of the Ad Hoc ECE Publicity Committee (since Feb. 2006)
Member of the Ad Hoc ECE Strategic Planning Committee (July 2005-Sept. 2005)
Member of the Ad Hoc ECE Committee for ECE 442L-Communications Lab (since June 2005)

Invited talk in Biomedical Engineering Seminar Course
FEA Faculty meeting secretary (September 2004-August 2005)
Vice Chair of the IEEE Communication Society Chapter in Lebanon
Consultant in Dar Al Handasah (July-September 2005)

A. El Hajj; Strategic Planning Committee, Software Committee (chair), Recruitment Committee
Advisory Committee, Academic Committee
AUB-U31 Cooperation Committee, Academic Committee, Teaching Excellence Committee
Program Committee Member: The 2006 International Conference on Computer Engineering & Systems (iccs'06), November 5-7, 2006, Cairo, Egypt
International Program Committee Member: Iasted International Conference on Education and Technology (icet 2006), Calgary, Canada, July 17-19, 2006
International Program Committee Member: Iasted International Conference on Web-based Education (wbe 2006), Puerto Vallarta, Mexico, January 23-25, 2006
Editorial Board Member, Spreadsheets in Education, January 2004-current date
International Program Committee Member: Iasted International Conference on Education and Technology (icet 2005), Calgary, Canada, July 4-6, 2005

K. Kabalan; Advisor, Engineering Society students April 2000-present
Advisor, AUB Music Club, May 2000-present
Member, Task Team 11 on Educational offering, March 2002-present
Member, University Graduate Studies Committee, October 2004-present
Member, Faculty Graduate Studies Committee, October 2004-present
Member, Department ABET Committee, September 2001-present
Member, Graduate Studies Committee, September 2004-present
Chairman, Communications Committee, September 2004-present
Member, Final Year Project Committee, September 2004-present

S. Karaki; FEA Research Committee, (chair)
University Research Board, 2003-2006
Energy Efficiency Planning at AUB, Principal Investigator, AUB, $89,000.

F. Karamoh; Advisor for 36 ECE students
EC5 Library Committee
Biomedical Engineering Seminar
Marshall in 2006 commencement
Organizing Committee, Conference on Computational Models in Medical and Health Sciences” AUB conference planned for Feb 2007
I served as a member of the IEEE Engineering in Medicine and Biology Society, Shanghai, China, from 2005.

A. Raissi; Chairman, ece Department; ece Undergraduate/ABET Committee; ece Graduate Committee; ece Ad hoc Strategic Planning Committee; ece Ad hoc Recruiting Committee; efe Academic and Curriculum Committee; efe Advisory Committee; efe Ad hoc Strategic Planning Committee; efe Ad hoc Space Committee; efe Ad hoc Math Committee; aub Strategic Planning Steering Committee.

M. Mansour; Graduate advisor (member of the ece Graduate Committee)

Advisor for 38 undergraduate students.

Member of the ece committee
Chairman of the efe SAC committee
Member of the Students’ Integrity Committee (part of IPP)

Member of the Technical Program Committee, IEEE 2005 Global Telecommunications Conference, Nov. 28-Dec. 2, St. Louis, Missouri, USA.

Member of the Technical Program Committee, IEEE Signal Processing Workshop, Nov. 2005, Athens, Greece.

Member of the Technical Program Committee, IEEE 2005 Vehicular Technology Conference, Sep. 26-29 2005, Dallas, Texas, USA.

Treasurer of the IEEE Lebanon Chapter, 2006.

F. Mrej; Student advising (38 students)

Freedom Club / fea src/Engineering Society

ece Publicity Committee
Chairman of control and instrumentation ece lab committee

Student Affairs Committee

Strategic Committee (one semester)

University Senate

University Committee on Student Affairs (chair)

USNC

SRC Elections Committee

Senate representative to the BTG (05-06)

NSCB reviewer

InDexco foundation (InCO) advisor for community educational programs

Member of National Committee at Prime Minister Office for reviewing applications/

Interviewing leadership positions for public electricity sector, spring 2006

I3OL National ICT Industry-sector study, reviewer spring 2006

Member of the International Program Committee for the IEEE Intelligent Transportation Systems Conference, September 17-20, 2006, Toronto, Canada

Member of the International Program Committee for the 14th IEEE Mediterranean Conference on Control and Automation (MED’06), Italy, June 2006

AUB summer workshop with ESCWA and InDexco foundation for business plan development, Aug-Sep 2005

Member of the Board of Directors for the new “Beirut Technology and Health Incubator” funded by the EU, spring 2006


J. Saade; Student advising (40 students)

ece FYP Committee (chair)

ece Departmental Committee that examined the previous learning outcomes of the ece 440 – Signals and Systems course. New learning outcomes were proposed and implemented this year (spring term).

M. Saghri; Student advising (35 students)

Member, ece TEMPSUS/CITPER Group. Worked on establishing the new MS in ICT in the ece department

Member, efe Admissions Committee

Facilitator, Workshop on Teaching Large Classes, January 20, 2006

Facilitator, Teacher-Oriented Methods I (Handling Large Classes), Faculty Seminar on – Learning and Teaching Excellence, March 23, 2006

Visited the Universidad Politecnica de Catalunya (UPC) (Barcelona, Spain) to discuss student and faculty exchange agreements related to the TEMPSUS/CITPER project, November 16, 2005.

Visited the University of Southampton (UK) to participate in the TEMPSUS/CITPER group meeting, December 4-8, 2005.


Chair, IEEE Lebanon Computer Society

Consulting, Fidus Systems Lebanon (sal); spring 2005-2006.

Courses Offered

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<tr>
<th>Summer 2005</th>
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<tr>
<td>eece 320</td>
<td>Digital Systems Design</td>
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<tr>
<td>eece 330</td>
<td>Data Structures and Algorithms</td>
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<tr>
<td>eece 440</td>
<td>Signals and Systems</td>
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<tr>
<td>eece 442</td>
<td>Communication Systems</td>
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</tr>
<tr>
<td>eece 470</td>
<td>Electric Machinery</td>
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<td>eece 500</td>
<td>Approved Experience</td>
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<tr>
<td>eece 503</td>
<td>Special topics (Real-Time DSP Lab)</td>
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</tr>
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</table>

Graduate courses

| eece 799 | Thesis |

<table>
<thead>
<tr>
<th>Fall 2005-06</th>
<th>Undergraduate courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>eece 210</td>
<td>Electric Circuits</td>
</tr>
<tr>
<td>eece 230</td>
<td>Computers and Programming</td>
</tr>
<tr>
<td>eece 310</td>
<td>Electronics I</td>
</tr>
<tr>
<td>eece 320</td>
<td>Digital Systems Design</td>
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<tr>
<td>eece 330</td>
<td>Data Structures and Algorithms</td>
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<tr>
<td>eece 421</td>
<td>Computer Architecture</td>
</tr>
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<td>eece 511</td>
<td>Electronics II</td>
</tr>
<tr>
<td>eece 520</td>
<td>Electromechanical Systems</td>
</tr>
<tr>
<td>eece 442</td>
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<tr>
<td>eece 460</td>
<td>Electromagnetics</td>
</tr>
<tr>
<td>eece 470</td>
<td>Control Systems</td>
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<td>eece 503</td>
<td>Fundamentals of Power Systems Analysis</td>
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<tr>
<td>eece 520</td>
<td>Sp. Topics: Audio Engineering</td>
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<tr>
<td>eece 530</td>
<td>Electric Drives</td>
</tr>
<tr>
<td>eece 571</td>
<td>Industrial Electrification</td>
</tr>
<tr>
<td>eece 501</td>
<td>Final Year Project</td>
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</tbody>
</table>

Graduate Courses

| eece 605S | Biomedical Engineering I |
| eece 615  | RF and Microwave Circuits for Communications |
| eece 625  | Embedded Systems Design |
| eece 630S | System Analysis and Design |
| eece 655S | System Identification |
| eece 640  | Wireless Communications |
### Undergraduate courses

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<thead>
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<th>Course Title</th>
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<tr>
<td>eece 641</td>
<td>Information Theory</td>
</tr>
<tr>
<td>eece 642</td>
<td>Database Systems</td>
</tr>
<tr>
<td>eece 643C</td>
<td>Advanced Digital and Data Communications</td>
</tr>
<tr>
<td>eece 644C</td>
<td>Fuzzy Sets, Logic and Applications</td>
</tr>
<tr>
<td>eece 648</td>
<td>Advanced Antenna Design</td>
</tr>
<tr>
<td>eece 670Q</td>
<td>Queueing Theory</td>
</tr>
<tr>
<td>eece 678</td>
<td>Web Server Design and Programming</td>
</tr>
<tr>
<td>eece 684E</td>
<td>Renewable Energy Systems</td>
</tr>
<tr>
<td>eece 691C</td>
<td>Digital Signal Processing</td>
</tr>
<tr>
<td>eece 798A</td>
<td>Sp Topics: Advanced Internetworking Technologies</td>
</tr>
<tr>
<td>eece 799</td>
<td>Thesis</td>
</tr>
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</table>

#### Laboratory Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>itec 240</td>
<td>Computers and Communication Systems</td>
</tr>
<tr>
<td>itec 241</td>
<td>Software Systems</td>
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</table>

#### Final Year Projects

<table>
<thead>
<tr>
<th>Title</th>
<th>Supervisor</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design of a Car-Following Controller for a Safe and Smooth Drive on Highways</td>
<td>Jean Saade</td>
<td>Rizk Saade, Amin Nawfal, Ramzi Al-Haddad</td>
</tr>
<tr>
<td>Improvement of Soft Handoff Thresholds in Mobile Comm for Performance Improvement</td>
<td>Nassir Sabah</td>
<td>Yusr Sabra, Mohamed Ali Eid, Mirna Abou Mjahed</td>
</tr>
</tbody>
</table>

### Graduate courses

<table>
<thead>
<tr>
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<tr>
<td>Imp3 610S</td>
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</tr>
<tr>
<td>eece 605S</td>
<td>Biomedical Signal &amp; Image Processing</td>
</tr>
<tr>
<td>eece 604</td>
<td>Comm Eng’g for Genetics &amp; Bioinformatics</td>
</tr>
<tr>
<td>eece 612</td>
<td>Digital Integrated Circuits</td>
</tr>
<tr>
<td>eece 622</td>
<td>VLSI Signal Processing and Communications Systems</td>
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<tr>
<td>eece 624</td>
<td>Digital System Testing</td>
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<tr>
<td>eece 630</td>
<td>Distributed &amp; Object Database Systems</td>
</tr>
<tr>
<td>eece 637S</td>
<td>Robotics</td>
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### Lab courses

<table>
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<td>eece 311L</td>
<td>Electronics Lab</td>
</tr>
<tr>
<td>eece 312L</td>
<td>Communications Lab</td>
</tr>
<tr>
<td>eece 410L</td>
<td>Control Systems Lab</td>
</tr>
<tr>
<td>eece 411L</td>
<td>Electric Machines Lab</td>
</tr>
<tr>
<td>eece 413L</td>
<td>Power Electronics and Drives Lab</td>
</tr>
<tr>
<td>eece 511L</td>
<td>Internetworking Lab</td>
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</table>

### Final Year Projects

The eece fourth-year students worked in groups on various Final Year Projects. Following is a list of the project titles, supervisors, and students who worked on them:

**FPICA Implementation of a USB Core**
- Students: Georges Ghaneen, Liza Tutunjian, Arine Hadidian
- Supervisors: Profs. Mazen Saghir and Ali Chehab

**Reconfigurable Baseband Blocks For Wireless Multi-Standard Receivers**
- Students: Abdul Hadi Al-Sayed, Hasan Khalifeh, Houssam Hayek
- Supervisors: Profs. Mazen Saghir and Walid Al-Ahmad

**Face Recognition on FPGAs**
- Students: Ramzi Madi, Bassem Sawan, Robin Lahoud
- Supervisor: Mazen Saghir

**Optical Instrument for Measuring Frequency of Vibration**
- Students: Mohamed Bechara, Rami El Mawas Rima Al-Bekai
- Supervisor: Nassir Sabah

**Cardiovascular Response Following Exercise**
- Students: Yusr Sabra, Mohamed Ali Eid, Mirna Abou Mjahed
- Supervisor: Nassir Sabah

**Intelligent Adaptation of Soft Handoff Thresholds in Mobile Comm for Performance Improvement**
- Students: Rizk Saade, Amin Nawfal, Ramzi Al-Haddad
- Supervisor: Jean Saade

**Design of a Car-Following Controller for a Safe and Smooth Drive on Highways**
- Students: Ahmad Abou-zaher, Ziad Kassab, Murad Al Haj
- Supervisor: Jean Saade

**Handwriting Recognition Glove**
- Students: Ali Dika, Walid Abla, Georges Frangieh
- Supervisor: Jean Saade
Experimental Mine Detection using Acoustic / Siesmic Approach
Supervisors: Foad Mrad, Ahmad Smaili.

Hybrid Wheel Chair
Students: Ramzi Stephan, Elias Achkar, Jackie Fares, Hsein Hajo
Supervisors: Foad Mrad, Ahmad Smaili.

Computer Based SRC Election at AUB
Students: Nadim Ghanas, Jad Mouallil, Mirian Itani
Supervisors: Foad Mrad, Hassan Artail

Improving Network Performance Using Control Feedback
Students: Rami Maalouf, Ziad Habchi, Souheil Khoury, Zahi Bindi
Supervisor: Foad Mrad

Implementation of Basic Blocks of MIMO Communications Systems for Performance Analysis & Comparison
Students: Emad Azzam, Amal Alameh, Anis Tabboush
Supervisor: Mohammad Mansour

Cryptoglasses
Students: Ibrahim Itani, Samer Hajj Ali, Bassam Assaf
Supervisor: Ayman Kayssi

Exploration of New Techniques in Brain-Computer Interface
Students: Salam Akoum, Maram Itani, Rayan Jaber
Supervisor: Fadi Karameh

Pupil/EEG-Based Drowsiness Detector
Students: Mayysaa Issa, Nabilh Nagdi, Tarek Shamseddine
Supervisor: Fadi Karameh

Modeling and Design of Silicon Neurons
Students: Joelle Mitri, Ali Tabet, Mansour Rachid
Supervisors: Fadi Karameh, Mohammad Mansour

Solar Powered Grid Connected Inverter with Maximum Power Point Tracking
Students: Ahmad Chukabks, Hussein Makkri, Mohammad Toufic Zeino-Saccal
Supervisor: Sami Karaki

Flywheel Energy Storage System
Students: Ali Bazzi, Mohammad Tarhini, Ahmad Maazouf
Supervisor: Sami Karaki

Data Transmission over Power Lines and Applications
Students: Jad Allam, Carmille Eid, Joseph Raad
Supervisors: Sami Karaki, Jean Saade

A Medical System for Diagnosis Support
Students: Sarah Ouwaya, Maya BouDjab
Supervisor: Karim Kabalan

A Fully Optimized Parking Area
Students: Marwan Zaabalawi, Jad Abi Nassif, Samer Acrar
Supervisor: Karim Kabalan

Multi-Agents for Image Understanding
Students: Alaa Sulakeh, Mohamad Darwish, Abbas Darwish
Supervisors: Karim Kabalan, Walied Smari

Automated Online Translator
Students: Hicham Yarmout, Karim Kanso
Supervisor: Ali El Hajj

DFNZ 06
Students: Jean Moukarzel, Antoine Akiki, Joseph Chaoul
Supervisor: Ali El Hajj

DFNZ 06
Students: Alain Tager Tarek Baalbaki Abdel Karim El Hajjar
Supervisor: Ali El Hajj

Bluetooth-Based Location Estimation for Mobile Applications
Students: Samer Khabat, Reda Haidar, Hussein Fadlallah
Supervisor: Zafer Dawy

Building Gene Networks: A Multiorganism Approach

Students: Rami Abdallah, Marcel Nassar, Hady Ali Zeineddine
Supervisor: Zafer Dawy

A Direction Finding Application for GSM Networks
Students: Amena Amro, Salim Al-Sahli, Mohammad Mahdi Kassir, Dania Noamani
Supervisors: Zafer Dawy, Mazen Saghir

UMTS Radio Network Planning & Optimization for Lebanon
Students: Bilal Mikati, Haytham Yagh, Mounir Arab, Samer Chahem
Supervisor: Zafer Dawy

Robot Navigation & Localization via Natural Landmarks
Students: Najat Bou Diab, Natalie El Nabbout, Hussein Slim
Supervisors: Ali Chehab, Sameer Abdallah

V-CAD: Vision-Computer-Aided Device
Students: Nour Harriri, Sandy Khoury, Fida Tefenkji
Supervisors: Ali Chehab, Sameer Abdallah

Performance Assessment of Fuel Cell Based Energy Systems
Students: Karam Wahab, Tony Min, Wald Abu-Daher
Supervisor: Riad Credid

A Water Pumping System Fed by Renewable Energy
Students: Nizar Ibrahim, Khalil Al Arab, Tarek Friejah
Supervisor: Riad Credid

Electromagnetic Fields from Power Lines
Students: Salma Abu Izzeddin, Hiba Obeid, Kamal Berberi
Supervisor: Farid Chaban

Energy Sustainability at AUB
Students: Nadim Haddad, Hamzi El Khoury, Christian Azoury
Supervisor: Farid Chaban

CAD Optimization of PM Machines
Students: Dima Fares, Reef Al-Mokadem, Adham Bou Ghannam, Rabih Chousayni
Supervisor: Farid Chaban

Dynamic Programming in Pattern Recognition
Students: Bilal Fadlallah, Oliver Saleh, Mazen Hajjar
Supervisor: Louay Bazzi

Implementation of Pseudorandom Number Generators and Extractors
Students: Ghid Maatouk, Widad Machmouchi, Mona Bazzi
Supervisor: Louay Bazzi

Translation of Motion into Sound; Application: Sign Language into Speech
Students: Elie Shalhoub, Khalid Omari, Ahmad Badr
Supervisor: Hassan Artail

Context-Aware Website
Students: Zeinoun El Khoury, Ramzi Rayess, Mounir El Chakkour
Supervisor: Hassan Artail

Propagation Model Development and Radio Planning for Future WiMax Deployment in Beirut
Students: Adel Yammout, Ali Dabbous, Imad Ateii, Mohamed Hasna
Supervisor: Walid Ali-Ahmad

Wireless OFDM-Based Real-Time Video Streamer
Students: Bassem Nakhil, Tammam Sahli, Ziad Zein
Supervisor: Walid Ali-Ahmad

Phased Array Microphones for Voice/Sound Location
Students: Diana Dh, Wissam Khalaf, Ralph Helou
Supervisor: Walid Ali-Ahmad

Image to Sound
Students: Farah Charafeddine, Nour Shublaq, Mona Itani
Supervisor: M.A. Al-Alaoui

Iris Recognition for Security Purposes
Students: Jameel Abou Saleh, Abdullah Bou Saleh, Samer Charafeddine
Supervisor: M.A. Al-Alaoui

Sound to Image for the Deaf
Students: Jimmy Azar, Hassan Abou Saleh
Supervisor: M.A. Al-Alaoui
A Fast Turbo Code Decoder For Software Radios
Students: Mazen Abou Najm, Rami Daher; Mohammed El-Saadi
Supervisor: Ibrahim Abou Faycal

Searching for Specific Sequences in Audio Files
Students: Charles Ghossoub, Guy Haddad, Rami Atme
Supervisor: Ibrahim Abou Faycal

Positioning Using WiFi
Students: Fady Chedid, Bruno Wehbeh, Georges Elia Hanna
Supervisor: Ibrahim Abou Faycal

Graduate Theses

MASTER OF ENGINEERING THESIS
Rula Antoun; Routing in Mobile Ad Hoc Networking Using LIME, November 2, 2005, supervised by Professor Hassan Artail
Alaa Dalgham; WiSec: VPN over 802.11, Design and Implementation of a Secure Virtual Wireless Environment, October 26, 2005, supervised by Professor A. Chehab
Ayman Tajeddine; A Truly Comprehensive Reputation - Based Trust Model for Distributed Computing, December 16, 2005, supervised by Professor A. Chehab
Camille Caspari; Policy - Driven Web Security for Hand Held Wireless Devices, February 20, 2006, supervised by Professor Ali Chehab
Dana Dannan; Performance Comparisons for Serial Concatenated Block Convolution Codes with sequentially and iteratively decoded, February 2005, supervised by Professor K. Kabalan
Eliaa Nahr; TRUMMAR Optimization and Implementation on Wide Scale Networks, October 18, 2001, supervised by Professor A. Chehab
Maher Sidani; Adaptive Control of Induction Motors, June 2006, supervised by Professor F. Mrad
Mohammad Mortada; Empirical Analysis of Software Reliability Models, Feb 2006, supervised by Professor F. Mrad
Mohammad Al-Hakeem; Demand Driven Control of Variable Flow HVAC Hydronic Networks, August 2005, supervised by Professor F. Mrad
Rania Wehbeh; SERVICE: Secure Routing and Protection of Security Mechanisms in Inter-Vehicular Communication (iVC) Networks, supervised by Professor A. Chehab
Ruba Kaisi; Dawsonen: A Defense Mechanism Against Wormhole Attacks in Wireless Sensor Networks, December 12, 2005, supervised by Professor A. Chehab
Samer Taweeb; Control of National Economic Model, June 2006, supervised by Professor F. Mrad
Yasser Sheer; Secure Range Extensions in IEEE 802.11, August 1, 2005, supervised by Professor A. Chehab
Anis Nazer; Evaluation of Dynamic Current Testing for CMOS Domino Circuits, December 12, 2005, supervised by Professor A. Chehab
Chadi Chaker; 155 based Risk Assessment of Air Pollution, June 9, 2006, supervised by Professor F. Chaaban
Eliaa Yaacoub; Hybrid Linear and Circular Antenna Arrays, February 2006, supervised by Professor K. Kabalan
Jacques Youssef Boudakian; Power System Operation and Planning in Competitive Electricity Markets, AUB Master’s Thesis, October 2005, supervised by Professor S. Karaki
Nagy Issam Mounsea; A Reduced Complexity Turbo Decoding Algorithm. (Defense: September, 2005, supervised by Professor Adnan Al-Alaoui
Raji Zeitouny; Scalable Architecture to Support Database Caching in MANETS, June 7, 06, supervised by Professor Hassan Artail

Departmental Activities

Budgets
MAJOR EQUIPMENT
Power Electronics Lab [$10,100], Biomedical Instrument Lab [$58,000], RF Lab [$126,000],
ASHA
RF Lab [$200,000], Minor Equipment [$35,000], Supplies [$13,000], Student Work [$16,500],
Meetings
ECE Meetings; Twelve regular departmental meetings and five special meetings were held during academic year 2005-06.
EAB Meeting; Agenda of the meeting of the External Advisory Board on June 14, 2006; State of the ECE department; Strategic Plan; new programs in ece; other business.

Seminars
The ECE Department organized 16 technical seminars during the period July 1, 2005 - June 30, 2006.
*A Frame-Based Classifier that Provides Endpoints for ‘Owner Speech’ Recorded in Multi-Channel Meeting,” Mr. Ziad Al Bawab, Carnegie Mellon University, July 14, 2005.
*“Equalizer Design to Maximize Bit Rate in ADSL Transceivers, Prof. Brian Evans,” University of Texas at Austin, August 3, 2005.
*“No-Reference Objective Wavelet-Based Noise Immune Sharpness Metric,” Mr. Rony Ferzli, ASU, January 5, 2006.
*“Neural Testing of Mixed-Signal/RF Circuits,” Mr. Haralampos Stratigopoulos, Yale University, April 6, 2006.
*“Research Activities in IC Design and Test at iXLab Laboratory,” Prof. Yann Deval, University of Bordeaux, April 11, 2006.
*“Wireless Internet: Challenges and Deployment in Lebanon,” Mr. Ian Howard, May 10, 2006.

Ahmad Houalla; supervised by Professor K. Kabalan
Amor Bzeih; supervised by Professor S. Karaki
Amine Abu-Akar; supervised by Professor F. Chaaban
Hussein Haslik; supervised by Professor Hassan Artail
Ibrahim Al Kassem; supervised by Professor Z. Dweikah
Shehab Alsalloum; supervised by Professor F. Chaaban
Nael Dweikah; supervised by Professor A. Chehab
Rifa Farah; supervised by Professor R. Chedid
Rola Aylo; supervised by Professor F. Chaaban
Tammam Tabbarah; supervised by Professor F. Karameh
Youssef Chamoun; supervised by Professor A. Chehab

Ahmad Houalla; supervised by Professor K. Kabalan
Amor Bzeih; supervised by Professor Z. Dweikah
Amine Abu-Akar; supervised by Professor F. Chaaban
Hussein Haslik; supervised by Professor Hassan Artail
Ibrahim Al Kassem; supervised by Professor Z. Dweikah
Shehab Alsalloum; supervised by Professor F. Chaaban
Nael Dweikah; supervised by Professor A. Chehab
Rifa Farah; supervised by Professor R. Chedid
Rola Aylo; supervised by Professor F. Chaaban
Tammam Tabbarah; supervised by Professor F. Karameh
Youssef Chamoun; supervised by Professor A. Chehab
six | Students

Enrollment & Statistics

**UNDERGRADUATE STUDENTS**

A total of 613 undergraduate students were enrolled in the ECE department in both majors - Computer and Communications Engineering (CCE) and Electrical Engineering (EE) - during the academic year 2005-2006.

<table>
<thead>
<tr>
<th>CLASS OF</th>
<th>CCE</th>
<th>EE</th>
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<tr>
<td>2008 (1st year)</td>
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<td>69</td>
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<td>2007 (2nd year)</td>
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<td>81</td>
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<td>2006 (3rd year)</td>
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<tr>
<td>2005 (4th year)</td>
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**Student Employment**

The ECE department had 93 students registered in the student work scholarship for the academic year 2005-2006, 45 students in the fall term, and 48 students in the spring term.

**GRADUATE STUDENTS**

<table>
<thead>
<tr>
<th>TERM</th>
<th>CCE</th>
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<td>Spring 2005-06</td>
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**GRADUATE ASSISTANTS**

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<td>Summer 2005</td>
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<td>Spring 2005-06</td>
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</table>
one | Introduction

Over the past year, ME faculty have put forth a commendable amount of effort to render quality undergraduate and graduate education in mechanical engineering and to expand the academic learning experiences for our students through a variety of activities and creative services. For the second year, the faculty continued to follow the department assessment calendar by employing direct and indirect assessment tools to student learning outcomes at the course and program level in order to improve the undergraduate program content and delivery and insure that all students have acquired the expected program learning outcomes. This is not a trivial task and it is an added burden on the faculty; to document course materials, perform course self-assessment, meet frequently to evaluate outcomes, and make recommendations for continuous improvement takes time, planning, and thought. The following are a few examples of the academic improvements that will be implemented in 2006-2007:

- The Department has revised the ME undergraduate curriculum to allow our students greater flexibility in their studies, and to strengthen the design experience across the program. Optional tracks were introduced in thermal and fluid sciences; design, materials and manufacturing; and mechatronics. The newly revised curriculum will be followed by students joining the ME department starting in the fall of 2006.
- The Department has revised the assessment method, grades, deliverables time line, and coordination load of the Final Year Project. Faculty experience has shown that being the FYP coordinator is time-consuming and should be part of the teaching load rather than being considered service.
- The Department changed the master’s program course requirements, reducing the number of course credit hours from 24 to 21. The change was implemented to allow students more time to dedicate to their research.
- The Department joined the other FE departments to revise the required math courses in the undergraduate mechanical engineering program.

Over the past five years, the undergraduate enrollment has grown by 50% and graduate enrollment has doubled. At the graduate level, the number of students who completed their theses jumped from five last year to ten students this year. The increased enrollment has been met with department dedication to stretch resources and provide students with a high quality learning experience. The integration of the graduate assistants into the departmental workforce has helped to meet the increased demand on the program. A favorable working environment for graduate students has attracted dedicated full-time graduate students to the ME program. About 85% of our graduate assistants receive research support from faculty research grants and are committed to a thesis advisor by the end of the first term; they generally join the graduate program.

Two of our faculty members, Prof. Ramadan Hamadeh and Prof. Alan Shihadeh, have been promoted to the rank of associate professor effective Oct. 1, 2006. One new faculty member, Prof. Ghareem Owais, who received his PhD from the University of Michigan Ann Arbor, joined the department in the area of experimental fluid dynamics. Two new faculty members have been extended offers and will join the department during the academic year of 2007-08. Dr. Eva Kanso from UC Berkeley and Prof. Abuel-Rahman El-Khalidy from Cornell.

The ME faculty continues to be recognized for their outstanding scholarly work. Professor Moukalled was appointed a Fellow of the Center of Advanced Mathematical Studies and was cited by the Organization of Islamic Countries among the top 400 scientists from Member States. This was based on the total number of his research papers indexed in the Web of Science Database and on his involvement in the promotion of research in Lebanon. Professor Hamade has been appointed to the editorial advisory board (EAB) of the Journal of Adhesion Science and Technology (JAST); the appointment is from January 2006 to January 2009.

Two new graduate fellowship awards were introduced this year. The Petrofac Graduate Fellowship valued at $12,500/year was awarded to ME graduate student Elie Kfoury. The Saklik Renewable Energy Graduate Thesis Award to promote research in the field of renewable energy ($60) with special applications to Lebanon, valued at $3,000 per year, was awarded to the ME graduate student Mohamad Ayyoub who completed his master’s degree in February 2006. For the third year in a row, the R&F Abdul-Hadi-Debs Graduate Award for Academic Excellence in Research was awarded to a mechanical engineering graduate student, Rawad Saleh.

Our research facilities were upgraded with the arrival of a wind tunnel facility and laser flow visualization system and the installation of human gait research equipment in the bioengineering laboratory. The ME department is among the few pioneering programs at AUB that was recommended by the Program Review Team appointed, by the New York State Department of Education, to start a PhD program in the fall of 2007-08. The final approval of the program is pending the approval of the AUB Board of Trustees and the degree registration at the New York State Department of Education.

The department continues to take great pride in the quality of its graduates. This annual report presents only a modest picture of the achievements in ME/FEA in 2005-06, highlighting the activities and accomplishments of the faculty staff, and the students. For more information you can refer to the web site: http://webfe.aub.edu.lb/fea/med/

Nesreen Ghaddar; Chairperson

MECHANICAL ENGINEERING | Personnel

two | Personnel

Faculty

<table>
<thead>
<tr>
<th>Full Time Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marwan Darwish; Professor, PhD, Brunell University. Areas of interest: engineering materials and computations.</td>
</tr>
<tr>
<td>Nesreen Ghaddar; Professor and Chairperson, PhD, ME/FEA. Areas of interest: computational fluid dynamics, heat transfer, and energy conversion.</td>
</tr>
<tr>
<td>Fadi Moukalled; Professor and Associate Dean for Academic Affairs, PhD, Louisiana State University. Area of interest: computational fluid dynamics.</td>
</tr>
<tr>
<td>Albert Kurian; Associate Professor, MS, Yale University.</td>
</tr>
<tr>
<td>Ahmad Smalli; Associate Professor, PhD, Tennessee Technological University. Areas of interest: robotics and computer vision.</td>
</tr>
<tr>
<td>Samer Abdalalah; Assistant Professor, PhD, University of Sydney. Areas of interests: robotics and computer vision.</td>
</tr>
<tr>
<td>Ramsey Hamade; Assistant Professor, PhD, Virginia Polytechnic Institute. Areas of interest: design, materials, and manufacturing.</td>
</tr>
<tr>
<td>Kinda Khalaf; Assistant Professor, PhD, Ohio State University. Area of interest: biomedical engineering.</td>
</tr>
<tr>
<td>Issam Lakhi; Assistant Professor, PhD, ME/FEA. Areas of interest: analysis, modeling, and design of RF MEMS devices and system level modeling of MEMS, design and analysis of RF circuits and systems.</td>
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<tr>
<td>Alan Shihadeh; Assistant Professor, PhD, ME/FEA. Areas of interest: power engineering and combustion.</td>
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New Appointments

<table>
<thead>
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<th>Full Time Faculty</th>
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<tr>
<td>Ghareem Owais; Assistant Professor, PhD, University of Michigan, Ann Arbor. Areas of interest: experimental fluid mechanics, laser diagnostics, aerodynamics, hydrodynamics, and biofluidics. He joined the department in the spring semester 2006.</td>
</tr>
<tr>
<td>Eva Kansou; Assistant Professor, PhD, University of California Berkeley. Areas of interest: mechanics of swimming, solid and fluid mechanics and the development of mimetic computational algorithms. She will be joining the department during the fall semester 2006-07.</td>
</tr>
</tbody>
</table>
Abdel Rahman Khalidy; Assistant Professor, PhD, Cornell University. Areas of interest: dynamics, random vibration, and signal processing, machine design, optimal control systems and stochastic processes, health monitoring of mechanical systems using NDT techniques and dynamic signature analysis. He will be joining the department during the fall semester 2006-07.

PART TIME FACULTY

Piero Polony, Outline (lecturer), Ph.D., University of London.
Kamel Abu-Chal; Lecturer, Associate Professor at BAU, Ph.D, Kansas State University.
Najib Kasti; Lecturer, Ph.D, UC Berkeley.
Ihlaad Kasamani; Lecturer, MS, AUB.
Wajih Najm; Lecturer, MS, Computer Engineering, Germany.
Samir Berjaoui; Instructor, MS, Computer Engineering, Univ. of Southwestern Louisiana.

NEW PART TIME FACULTY

Rami Jabakhanji; Instructor
Charbel Seif; Instructor
Abdallah Hamza Zaitzah; Instructor
Ahmad Farshoukh; Assistant Instructor
Ezzat Jaroudi; Assistant Instructor

Department Secretary

Rana Abdel Rassoul

Mechanical Engineering Lab Personnel

Hisham Ghaliyani; Lab Supervisor
Dori Rouhana; Senior Technician
Roger Said; Mechatronic Lab Master

External Advisory Board

Dr. Habib Najm from Sandia National Laboratory was appointed to the M.T. Department External Advisory Board in April 2006. He is an alumnus of the department (class 1983) and he joined the Board with extensive experience in the research environment. He has managed cutting edge research projects in the area of combustion and simulation of stochastic dynamical systems and электроchemical micro fluid systems.

three | Faculty Research & Activities

Research Funding

VRD FUNDED RESEARCH PROJECTS


PROJECTS FUNDED BY THE LIBANESE NATIONAL COUNCIL FOR SCIENTIFIC RESEARCH (LNSCB)

Darwish, M., “Development of a Tool to Improve Casting Quality and Yields,” 2005-06, LL5,000,000.


Moukalled, F., “Phase Flow Simulation of Vapor Condensation over Cold Surfaces with Application to Improving the Performance of Air-conditioning Equipment,” 2005-06, LL6,000,000.

EXTERNAL RESEARCH FUNDING


Pending Research Grants


Refereed Journal Papers


[1] Graduate Student at AUB


Moukalled, F., Represented AUB and was an invited speaker to the workshop on National Phase-out Management Plan of Ozone Depleting Substances. The workshop was sponsored by the National Ozone Unit of the Ministry of Environment (Lebanon), United Nations (UNEP/ROWA) American Society of Heating Refrigeration and Air-conditioning Engineers (ASHRAE). Lebanese Chapter. The work shop was held at the American University of Beirut (AUB) on December 8, 2005.
### Courses Offered during the Academic Year 2005-06

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<td>Principles of Combustion</td>
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New Courses to be Offered

The following new courses were approved by the FEa Academic Committee and will be offered during the academic year 2006-07.

**UNDERGRADUATE**

**Mechanics and Applications** (3 credits)

This course examines the dynamics of particles and rigid bodies moving in three dimensions. Topics include Lagrange’s equations of motion for particles, rotations of rigid bodies, Euler angles and parameters, kinematics of rigid bodies, and the Newton-Euler equations of motion for rigid bodies. The course material will be illustrated with real-world examples such as gyroscopes, spinning tops, vehicles, and satellites. Applications of the material range from vehicle navigation to celestial mechanics, numerical simulations, and animations.

Pre-requisites: elementary course on Newtonian dynamics or consent of instructor.

**GRADUATE**

**Mech 609: Experimental Methods in Fluid Dynamics** (3 credits)

This is a graduate level course aimed at introducing students to experimental methods used to measure fluid flow quantities such as pressures, forces, and velocities. The course will start with an introduction to what and why we measure, and to uncertainty analysis and measurement error estimation. Some basic techniques for data reduction and data post-processing will be introduced. The available fluid measurement methods will be surveyed briefly, with selected applications. Emphasis will be on basic optical diagnostic techniques; namely particle image velocimetry (PIV) and laser induced fluorescence (LIF). The theoretical foundations of these techniques will be established, and the discussion will extend to practical considerations including software and hardware components. A few laboratory sessions will be incorporated into the course to supplement the lectures, and will make use of the instruments available in the ME department including the open circuit wind tunnel, and the PIV system. In addition to the lectures and lab sessions, emphasis will be on the available literature. Prior knowledge of the basic principles of fluid mechanics and fluid systems is required. MATLAB will be needed for course work.

### Approved Masters Theses & Supervision

Graduate students whose master’s thesis proposals have been approved by the FEa Graduate Studies Committee, during the academic year 2005-06:

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<td>Shihadeh, A.</td>
<td>Experimental Investigation of the Relative Contributions of Charcoal and Tobacco to Carbon Monoxide and Polycyclic Aromatic Hydrocarbon Yields in the Mainstream Smoke of the Narghile Waterpipe</td>
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<td>Ezzat Jaroudi</td>
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<td>Mohammad Al-Hakeem</td>
<td>Murad, F.</td>
<td>Demand Driven Efficient HVAC Systems - A Neuro-Fuzzy Logic Controller for Variable Speed Secondary Chilled Water Pumps</td>
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<td>Ghaddar, N.</td>
<td>Landmine Identification and Classification Protocol using Thermography and Numerical Modeling of the Thermal Signature Evolution</td>
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<td>Rawad Saleh</td>
<td>Shihadeh, A.</td>
<td>Evaporation and Condensation of Aerosol in a Constant Wall Temperature Pipe Plug Flow - A Computational Model with Experimental Validation</td>
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<td>Tony Saad</td>
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<td>Implementation of a High Performance CD Solver Using Cluster Based Parallel Computing</td>
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<td>Bachir Chaaya</td>
<td>Smalli, A.</td>
<td>Robochores: New Architectures and Optimum Synthesis</td>
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<td>Mazen Hassani</td>
<td>Smalli, A.</td>
<td>Flexible Link Model and Topology Optimization of Compliant Mechanisms</td>
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<td>Hussein Al-Sayed</td>
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<td>Formulation and Implementation of a Numerical Model for the Simulation of Evaporation of Injected Liquid Droplets into a Gas Flowing at Supersonic Speed</td>
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<td>Zeina Alwan</td>
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<tr>
<td>Marwan Katerji</td>
<td>Shihadeh, A.</td>
<td>Development of a Portable Closed Loop Control Isokinetic Sampling System to Assess Toxicant Exposure of Waterpipe Smokers in Natural Settings</td>
</tr>
</tbody>
</table>
**Visiting Scholar**
Frank Pfefferkorn; University of Wisconsin, Madison. Dr. Pfefferkorn presented a seminar on Micro-End Milling and Thermally-Assisted Manufacturing. He met with me third and fourth year students to discuss the opportunities available at the University of Wisconsin, inviting them for summer training.

**ME Annual Departmental ABET Meeting 2006**
The ME department held its day-long annual ABET meeting on Feb. 2, 2006 at the Riviera Hotel. The meeting was attended by ME faculty to conduct a comprehensive review of the undergraduate curriculum and discuss strategic initiatives.

The revision was based on assessment results of the past three years and recommendations of discipline specific departmental committees. The curriculum introduces optional tracks within the major in thermal and fluid sciences; design materials; and manufacturing; and mechatronics. The revised curriculum increases the number of technical electives to 6 electives including one restricted elective in design.

Strategic initiatives that were discussed covered the future proposed plan for faculty hiring and areas of expertise needed. In addition, target future centers proposed include a Center for Innovation in Product Development (CIPD), and an Energy Research Center (ERC) under the FEa umbrella.

### six | Students

<table>
<thead>
<tr>
<th>Enrollment &amp; Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate Student Enrollment</strong></td>
</tr>
<tr>
<td>1st year</td>
</tr>
<tr>
<td>2nd year</td>
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<tr>
<td>3rd year</td>
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<tr>
<td>4th year</td>
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<tr>
<td>Graduate Students</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Students Graduating in October 2005</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>BE (Major me)</td>
</tr>
<tr>
<td>Master’s Degree (Major me)</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Students Graduating in February 2006</strong></th>
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<tbody>
<tr>
<td>Bachelor of Engg (Major me)</td>
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<tr>
<td>Master’s Degree (Major me)</td>
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</table>

**Graduates of June 2006**

<table>
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<tr>
<th><strong>Graduates of June 2006</strong></th>
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<tr>
<td>Bachelor of Engg (Major me)</td>
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<tr>
<td>Master’s Degree (Major me)</td>
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<table>
<thead>
<tr>
<th><strong>Transfer Students Accepted from Outside Aub to Me</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2005; Accepted</td>
</tr>
<tr>
<td>Spring 2005; Accepted</td>
</tr>
</tbody>
</table>

**Transfer Students from Within Aub to Me**

Total fall term & spring term (sophomore & freshmen) 16

**Transfer Students from Within Fea to Me**

<table>
<thead>
<tr>
<th><strong>Academic Year 2005-06</strong></th>
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<tbody>
<tr>
<td>From ARCH to me</td>
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<tr>
<td>From CEE to me</td>
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<tr>
<td>From mech to me</td>
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<td>From ee to me</td>
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<table>
<thead>
<tr>
<th><strong>ME faculty members</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>are supervising the thesis of the following current students who will be submitting proposals in 2006-07:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STUDENT NAME</th>
<th>THESIS SUPERVISOR</th>
<th>THESIS TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smaili, A.</td>
<td>Smaili, A.</td>
<td>Acoustic and Seismic Sensing of Burned Object and Landmining</td>
</tr>
<tr>
<td>Ahmad Al Masalkhi</td>
<td>Khalaf, K.</td>
<td>Design of an Intelligent Hypoxia Chamber Controller for InVivo and InVitro Biomedical Experimentation</td>
</tr>
<tr>
<td>Smaili, A.</td>
<td></td>
<td>Experimental Investigation on Active Vibration Control of Flexible Mechanisms Using Intelligent Control Schemes</td>
</tr>
</tbody>
</table>

| **Departmental Activities** |

- "Opportunities and Challenges for Aub in the Oil and Gas Industry," presented on March 23, 2006 by Mr. Saddam El-Husseini, Saudi Aramco X-Executive Vice President and a member of its Board of Directors.
- Micro-End Milling and Thermally-Assisted Manufacturing," presented on March 13, 2006 by Dr. Frank Pfefferkorn, Assistant Professor in the Department of Mechanical Engineering at the University of Wisconsin-Madison.
- Experience of ICT/PETRA with Engineering Professors, Doctors, Teachers, and Engineering Students," presented on May 25, 2006 by Mr. Samir Salih and Mr. Shadi Abdul Rahim from ICT and PETRA Facility.
- "Objective Computational Fluid Dynamics (CFD) - Current Status," presented on December 6, 2005 by Prof. Marwan Danish, me faculty member. mech 797 series.
- "Modeling of Cathodic Deposition of Elastomer/Metal Adhesive Bonds," presented on November 29, 2006 by Prof. Ramsy Hamade me faculty member. mech 797 series.
- Contact Characteristics and Their Contributions to Dynamic Instability of Mechanical Systems with Friction," presented on November 17, 2005, by Dr. Jamil Abdo, Visiting Fulbright Scholar.
- "Computer Aided Design of MEMS @aub," presented on October 18, 2005, by Prof Issam Lakkis, me faculty member. mech 797 series.
- "Dynamic Meshing Fluid/Structure Interaction," presented by Prof. Marwan Danish, me faculty member. mech 797 series.
- "Vortex Methods in Bounded Domains: Flow over Cylinder," presented by Prof. Issam Lakkis, me faculty member. mech 797 series.
- "Opportunities and Challenges for Aub in the Oil and Gas Industry," presented on March 23, 2006 by Mr. Saddam El-Husseini, Saudi Aramco X-Executive Vice President and a member of its Board of Directors.
Students who transferred from me to other majors
To CEE 1
To EE 2

Graduate student enrollment
Summer term 2005: 20
Fall term 2005-06: 30
Spring term 2006: 28

Graduate assistants (GAS)
Summer term 2005: 12
Fall term 2005-06: 19
Spring term 2006: 20

Research assistants (RA)
Academic year 2005-2006: 19

Student
In the Student Study Program, 30 registered undergraduate me students were selected
under the Specialized Work category for the academic year 2005-06. Their work assignments
included clerical work, help in research, help in lab experiments, developing material for the
website and similar tasks. The selection is based on merit and the departmental needs.

Awards
Dean’s Award
The following me students received the Dean’s Award for Creative Achievement for their
Paul Hajj Boutos, Bashir Jawhar, Roy Assaf, Jalal Haddad, Roy Baaklini, Marwan Cortas

Abdul Hadi Debs Endowment Award for Academic Excellence
Mr. Rawad Saleh a master’s student in the me department received the award this year.
Mr. Saleh achievements in the last two years include winning a fellowship to present a paper
at the Annual Society for Research of Nicotine and Tobacco in Prague (March 2005). He is
publishing a manuscript in Food and Chemical Toxicology; and co-authoring a presentation at
this year’s meeting of the American Association for Aerosol Research in Austin, Texas.

Sakkal Renewable Energy Graduate Thesis Award
Mr. Mohammad Ayoub a graduate student in the Department of Mechanical Engineering
received this award valued $3,000 for demonstrating evidence of quality research work in the
field of renewable energy with special applications to Lebanon.

Petroleum Graduate Fellowship
Mr. Elie Kfouri was awarded the fellowship valued at $12,500/year to cover his tuition and
stipend of his graduate education.
one | Introduction

The academic year 2005-06 was marked by numerous success stories in the Department of Civil and Environmental Engineering (CEE) at AUB. The team of faculty, students, and staff took great pride in the activities and achievements of the CEE Department which are summarized in this report, for the period spanning July 1, 2005, to June 30, 2006. These include teaching and research activities, service to the university and the community, participation in development workshops and conferences, and awards and honors granted.

The highlights of the year:

Prof. George Ayyoub received the university’s Distinguished Faculty Service Award for 2005 in recognition of his lifelong dedication to the excellence of AUB.

Ms. Zakeya Deeb, the secretary of the department, was honored by the university with the President’s Service Excellence Award for her selfless devotion and service to the department.

Prof. Salah Sadek was promoted to the rank of Professor effective October 2006.

Mr. Abdallah Zakhem (President of Zakhem International - Lebanon, and Chair of CEE External Advisory Board) and Dr. Hani Mahmassani (Professor of Civil/Transportation Engineering at the University of Maryland and member of CEE External Advisory Board) received the FEA Distinguished Alumni Award at the 9th FEA Student Conference.

Dr. Mahmassani was also invited by the University Research Board at AUB to be a Visiting Research Scholar in the department for two weeks during spring 2006.

Two new faculty members were hired and are expected to join the department in spring 2006: Dr. Samer Madanat (Professor of Civil/Transportation Engineering and Director of Institute of Transportation Studies at the University of California, Berkeley) and Dr. Pascal Saikaly (Environmental Science/Technology, Postdoctoral Research Associate at North Carolina State University).

The PhD program, with majors in Civil Engineering (CEE) and Environmental and Water Resources Engineering (EwRE), was approved by the University and is due to start in October 2007, pending registration at the New York State Education Department (NYSED).

A preliminary proposal for an undergraduate program in Construction Engineering was initiated during a departmental faculty retreat and endorsed in principle by the CEE External Advisory Board. The program was given a high priority in the strategic planning, and will be further discussed and presented for approval to the university during the upcoming year. Research initiatives and facilities have achieved notable gains: the start of the Transportation Research Unit (TRU), a new collaborative research initiative between AUB and the Beirut Container Terminal Consortium (funded by BCTC), which Prof. Isam Kayis is heading on behalf of AUB/CEE; and the activation of a world-class Strong-Floor/Reaction-Wall in the Structural and Materials Laboratory, thanks to the great and sustained efforts by Prof. Mohamed Harajli and the Structures/Earthquake group; and the complete upgrading of the Hydraulics Laboratory.

Over the past two years, there has been a greater number of applicants for admissions into Civil Engineering. The department has been able to raise the admissions scores and thereby improve the performance of the students in this major.

A pioneering Civil Summer Camp was organized by the student Civil Engineering Society (CSES), with the Economic and Social Fund for Development (ESFD) at the Council for Development and Reconstruction (CDR). The pilot project consisted of CEE students volunteering one week for civil and community development work, hosted by the municipality of the village of Mishmish, Akkar.

Further academic activities and news include:

- Faculty maintained a high level of research productivity and contribution in services to the university and community, as evidenced in the core of this report.
- The temporary relocation of selected CEE laboratories to the new Science Research Building (SRB) was prepared for summer 2006. The permanent setting of all laboratories into the new Irani Oxy Engineering Complex (IOEC) was also planned incorporating a space expansion to accommodate new foreseen functions and facilities, with expected completion in 2008-09.
- The CEE Department continued preparations for the AUB 2000 accreditation of its undergraduate program. The department prepared for a visit by the ABEET Commission which was to take place in October 2006. The visit, for the second year in a row, was postponed due to the travel advisory for US citizens to Lebanon posted by the US government.
- An evaluation and revision of the current undergraduate curriculum was conducted during which basic and advanced courses were introduced or restructured. Improvements to the Final Year Project (FYP), offered for the second time, were observed at the process and outcome level, and the participation of CEE students at the 5th FEA Student Conference was notably evident and praised.
- Several social events took place during the year in the CEE department: activities and gatherings continued to be organized by the CEE; special achievements by faculty and staff and family happenings were recognized; the traditional Civil Engineering Gala dinner was held at the end of the year, where the CEE community of AUB and its guests gathered to bid farewell and best wishes for a successful future and career to graduating students.

The situation in Lebanon:

The assassination of the late PM Rafic Hariri in February 2005 and the instability which followed continued to leave their marks during this past year on the country and, it goes without saying, at AUB. The department did not escape some repercussions, the main of which was the cancellation of the Civil Engineering Infrastructure Systems Conference (CEIS 2006), organized by the CEE department in collaboration with other international institutions and foundations.

On the bright side, Lebanon was showing signs of health amid uncertainties. The country engaged in a healthy political debate, headed by the most influential parties and constituents, through continued round table discussions, addressing serious and once-considered taboo issues of concern to the country. Signs of economic recovery were being observed, accompanied by booms in certain areas and a high surge in the tourist industry. An indication of Beirut’s growth and popularity was its ranking as ninth best city in the world for travelers, according to Travel and Leisure Magazine’s annual “World’s Best” awards. All indications were that the upcoming year would be positive for all.

A final note, last, but foremost:

This year marked an event dear to the CEE Department, FEA, and AUB. In 1956, Prof. Ayyoub graduated from AUB, and for the past fifty years, he has remained committed and dedicated to his profession and to the educational mission of the university. Prof. Ayyoub is one of the true pillars of AUB, a leader, a visionary, and a friend.

Mounir Mabsout; Chairman
two | Personnel

Faculty

FULL-TIME FACULTY

There are eleven full-time faculty lines in the cee department. These are distributed as follows: Environmental Engineering and Technology [3], Geotechnical [1], Structural [3], Transportation [2], and Water Resources [2]. The current faculty and their rank composition during the 2005-06 was: 1 Assistant Professor, 1 Associate Professor, and 7 Professors. Two new faculty members in Transportation and Environmental Sciences/Engineering will join the cee department in 2007. All of the full-time faculty members are PhD holders from top us, uk, and Canadian institutions of higher learning.

Faculty Promotion

In June 2006, Dr. Salah Sadek was promoted to the rank of Professor, effective October 2006.

Summary Profile of Faculty Members

Hamed Assaf; Assistant Professor, PhD, University of British Columbia. His areas of interest are: water resources planning and management; watershed modeling; GIS; risk analysis; integration of information technology in engineering applications; and agents technology. He joined the department in 2005.

George Ayoub; Professor, PhD, London University, Imperial College. His areas of interest are: water and wastewater management; development of low cost methods and materials in water and wastewater treatment; and industrial waste treatment. He joined the department in 1956.

Habib Basha; Professor, PhD, University of California, Berkeley. His areas of interest are: development of analytical and numerical models for infiltration; modeling groundwater flow; solute transport in water networks; rainfall-runoff; and mathematical analysis of conduit flow. He joined the department in 1990.

Mutasem El-Fadel; Professor, PhD, Stanford University. His areas of interest are: environmental impact assessment; water allocation and conflict management; solid waste management; air pollution control; transport and the environment. He joined the department in 1996.

Bilal Hamad; Professor, PhD, University of Texas at Austin. His areas of interest are: design and behavior of reinforced concrete structures; bond and development of reinforcement; repair and strengthening of reinforced concrete structures; and concrete technology. He joined the department in 1990.

Mohamad Harajli; Professor, PhD, University of Michigan, Ann Arbor. His areas of interest are: design and behavior of reinforced, pre-stressed, and fiber reinforced concrete under static and seismic loads; and repair and rehabilitation of concrete structures using advanced composites. He joined the department in 1986.

Ismail Kayis; Professor, PhD, Massachusetts Institute of Technology. His areas of interest are: advanced technology applications in transport; national and regional transportation planning; and public transport systems. He joined the department in 1991.

Mounir Maboou; Professor and Chair, PhD, University of Texas at Austin. His areas of interest are: structural mechanics; finite element analysis; soil-structure interaction; and computing and information technology. He joined the department in 1997.

Salah Sadek; Associate Professor (promoted to Professor effective October 2006), PhD, University of California, Berkeley. His areas of interest are: electrical properties of clays; properties of solid waste fills and their evaluation; alternative landfill cover systems; and seismic design of dams. He joined the department in 1993.

PART-TIME FACULTY

During the academic year 2005-06, twelve part-time faculty members were appointed by the cee Department. Six of the twelve appointments were new recruitments. They assisted in teaching basic undergraduate, laboratory, and specialized graduate courses.

Hani Al Naghi; Instructor (Transportation), PhD, American University of Beirut (new).

Elie Awwad; Instructor (Materials), MS, American University of Beirut (new).

Hisham Basha; Lecturer (Structures), PhD, University of Michigan, Ann Arbor.

Fadi Hamdan; Lecturer (Structures), PhD, Imperial College (new).

Hassan Hasbini; Instructor (Information Technology), MS, Boston University.

Rami Jabakhani; Instructor (Civil Engineering), MS, American University of Beirut (new).

Ijahad Kassem; Lecturer (Dynamics), BS, American University of Beirut.

Shafi Kodeh; Assistant Instructor (Computer-Aided Drafting), MS Candidate, American University of Beirut (new).

Fouad Kusti; Lecturer (Structures), PhD, University of California, Berkeley.

Halim Nader; Lecturer (Surveying), BS, American University of Beirut.

Shafi Najjar; Lecturer (Structures), PhD, University of Texas at Austin (new).

Wajih Najm; Lecturer (Dynamics), MS, American University of Beirut.

FACULTY RECRUITMENT

Two new faculty members, Dr. Samer Madanat in Transportation Engineering and Dr. Pascal Saikaly in Environmental Science/Technology, have been recruited and will be joining the department in spring 2007. Dr. Samer Madanat is currently a Professor of Civil/Transportation Engineering and Director of the Institute of Transportation Studies at the University of California, Berkeley, and Dr. Pascal Saikaly is a Postdoctoral Research Associate at North Carolina State University.

ENDOWED CHAIR

An Endowed Chair position in Civil Engineering, sponsored by Dar Al-Handasah (Shair and Partners), was advertised. The selection of the successful candidate, which will be made from a pool of highly recognized applicants, should be finalized by fall 2006. The Dar Al-Handasah Endowed Chair position will provide a notable enhancement to the faculty resources, and is expected to have a significant impact on graduate education and research, especially on the PhD level.

Academic Support

Helmi El-Khatib; Manager and Supervisor, CEE Laboratories, MS, University of Toledo. Taught Construction Materials and Soil Mechanics lab sessions.

Elizabeth McGreevy; FEAC Academic Assistant, MS Education, SUC at Buffalo. Provided support to the department academic activities: ABET, PhD, assessment and review, editing, etc.

Lucy Semorjian; Research Associate, EERC and Environmental Laboratories, PhD, University of Bradford. Conducted and supervised environmental lab sessions, taught Environmental Microbiology elective course.

Visiting Research Scholars

The cee department hosted three research scholars in 2005-06.

Dr. Hanif Mahmassani visited AUB for two weeks as a Research Scholar in the spring of 2006 (May-June), by invitation of the University Research Board (URB). Dr. Hanif Mahmassani holds the Charles Irish Sr. Chair in Transportation Engineering at the University of Maryland, and is founding Director of the Maryland Transportation Initiative.

Dr. Rabi’i Mohlar visited the department as a Research Scholar for one month during July 2005; where he conducted research and collaborated with various faculty members.

Dr. Mohlar is an Associate Professor of Water Resources Engineering at Purdue University.

Dr. Hani Nassif visited the department as a Research Scholar for two weeks during July 2005; where he conducted research and collaborated with various faculty members. Dr. Nassif is an Associate Professor of Civil/Structural Engineering at the State University of New Jersey, Rutgers.

External Advisory Board Members

Mahmoud Abdul-Baki; Group Vice President, Middle East, Consolidated Contractors Co. (CCC)

Sati Arnout; PhD 1986, Senior Urban Specialist, The World Bank, USA

Paul Boulos; PhD 1989, President and COO, MW Inc., USA

Abdel Nasser; PhD 1986, Professor of Civil/Transportation Engineering, University of California at Berkeley, USA

Mounir Khatib; Founder and Partner, Khatib and Alami - CEC, Lebanon

Hani Mahmassani; PhD 1982, Professor of Civil/Transportation Engineering, University of Maryland, USA

Antoine Naaman; PhD 1977, Professor of Civil/Structural Engineering, University of Michigan, Ann Arbor, USA

Tammam Nakkash; PhD 1969, Managing Partner, Lebanon, Team International
Ghassan Saab, President and Chief Executive Officer, Sorensen Gross Construction, USA

Abdallah Zakhem, Chair of the Executive Committee, Zakheim International

Staff

Bashir Aysiala, Technical in Structural and Materials Laboratory
Jamal Bashir, Technician in Soil Mechanics Laboratory
Christian Chedid, Secretary of CEE Laboratories
Joseph Daoud, Assistant Technician in EERC and Environmental Laboratories
Helmi El-Khatib, Manager and Supervisor of CEE Laboratories
Zakeya Deeb, Secretary of CEE Department
Khaled Hallak, Assistant Technician in Hydraulics Laboratory
Abdel Rahman El-Shelhi, Assistant Technician in Structural and Materials Laboratory
Lucy Semerjian, Research Associate in EERC and Environmental Laboratories

Public Lectures & Development Workshops, Treatment and Reuse in the Mediterranean Countries, Scientific and Technological Development and Technological Innovation, Beirut (6-7 March 2006); Presentation of the Ministry of Environment (May 22, 2005).

George Ayoub attended and/or participated in the following: Fourth International Water Conference in the Arab Countries at Habtour Grand Hotel, Beirut (January 19-20, 2005); Workshop on Wastewater Sector in Lebanon at Rachidi Karami Educational Center, Tripoli (July 7, 2005); Workshops in Sweden sponsored by the Stockholm Environmental Institute: Application of Water Evaluation and Planning Tool to the Eastern Mediterranean (August 17-20, 2005) and Water for Agriculture in the Middle East, held as part of the World Water Week (August 21, 2005).

Mutasem El-Fadel attended and/or participated in the following: Workshops in Sweden sponsored by the Stockholm Environmental Institute: Application of Water Evaluation and Planning Tool to the Eastern Mediterranean (August 17-20, 2005) and Water for Agriculture in the Middle East, held as part of the World Water Week (August 21, 2005); Fifteenth Stockholm Water Symposium, World Water Week Conference, Sweden (August 22-27, 2005); Medawater International Conference workshop on the development of tools and guidelines for the promotion of the sustainable use of wastewater in the Mediterranean countries, Gefinor Hotel, Beirut (January 19-20, 2006); Medaware the Middle East, held as part of the World Water Week (August 21, 2005); Fifteen Stockholm Planning Tool to the Eastern Mediterranean (August 17-20, 2005) and Water for Agriculture in the Middle East, held as part of the World Water Week (August 21, 2005); Seminar on Developing a Teaching Portfolio, Center for Teaching and Learning, AUB (December 16, 2005); Third Meeting of the ESCWA Consultative Committee on Scientific and Technological Development and Technological Innovation, Beirut (6-7 March 2006); Presentation of the Ministry of Environment (May 22, 2005).

Hamed Assaf completed an ESR training workshop at CEC-Khatib & Alami (May 22, 2006).

Salah Sadek participated in preparation and presentation of two workshops on Teaching Portfolio preparation (December 2005 and April 2006).

Lucy Semerjian attended or participated in the following: the First International Conference on Sustainable Urban Wastewater Treatment and Reuse at the Nicosia Hilton Hotel, Cyprus (September 15-17, 2005); Seminar on Developing a Teaching Portfolio offered by the Center for Teaching and Learning at AUB; and workshops for course Management (WebCT I, WebCT II) and plagiarism prevention (Turnitin) offered by the Academic Computing Center at AUB. She also attended a three-day training course on “Theories and hands-on applications of Atomic Absorption Spectrophotometer” (Flame, graphite furnace, and hydride generation) at Thermo Electron Corporation, Cambridge, United Kingdom.

Academic Service at AUB

Hamed Assaf served on the FEAC Academic and Curriculum Committee and on the FECA Research Committee. He was the faculty supervisor of the Hydraulic Laboratories. He was assigned academic advisor to fourth year undergraduate students (Class of 2006).

George Ayoub served on the University Commencement Committee and on the University Reunion Committee, and assisted in activities with the AUB Development Office. He was a member of the FECA Space Committee. He was the faculty supervisor of the EERC and Environmental Laboratories. He was assigned academic advisor to EMR graduate students and to third year undergraduate students (Class of 2007).

Habib Basha chaired the FECA Library Committee, and was a member of the AUB FECA Committee and AUB department task team. He was in charge of upgrading the Laboratories Laboratory equipment and of the PhD proposal wrap-up. He was assigned academic advisor to third year undergraduate students (Class of 2007).

Mutasem El-Fadel chaired the Advisory Board of the Issam Fares Institute of Public Policy. He served on the University Senate and was a member of the Senate Steering Committee. He was the Acting Director of the Interfaculty Graduate Environmental Science Program and the Director of the Interfaculty Water Resources Center (WRC). He was a member of the Energy Research Group at FECA, Core Science Laboratory Committee at FAS, and Interfaculty Committee for the Environmental Science Program. He was assigned academic advisor to ETP graduate students and to first year undergraduate students (Class of 2009).
Bilal Hamad served on the FEI Admissions Committee and was a member of the FEI Fifth Student Senate of the Senate Committee. He was the faculty supervisor of the Structural and Materials Laboratory. He was assigned academic advisor to fourth year undergraduate students (Class of 2004) and Final Year Project (FYP) coordinator.

Mohammad Harajli was the chair of the University Unified Admissions Committee. He served on the FEI Advisory Committee. He was a member of the ABET department task team and of the department sub-committee in charge of developing the draft of the proposed Construction Engineering undergraduate program. He was a member of CAMS High-Performance Computing Committee. He was the faculty supervisor of the Transportation and Surveying Laboratory facilities. He was assigned academic advisor to first year undergraduate students (Class of 2006).

Isam Kaysi served on the FEI Advisory Committee (secretary) and on the FEI Strategic Planning Committee (2000-present). He was a member of the ABET department task team and of the department sub-committee in charge of developing the draft of the proposed Construction Engineering undergraduate program. He was a member of CAMS High-Performance Computing Committee. He was the faculty supervisor of the Transportation and Surveying Laboratory facilities. He was assigned academic advisor to second year undergraduate students (Class of 2008).

Mounir Mabsout (Chair of CE Department) served on the FEI Administrative Committee, Academic and Curriculum Committee, Space Committee, Strategic Planning Committee, FEI ABET Committee, ABET department task team, and FEI Math Committee. He was assigned academic advisor to graduate students, Intensive English, and special/transfer students.

Salah Sadek served on the following AUB committees: Interfaculty Financial-Aid, Strategic Planning - General Education, Teaching Excellence Award, and Athletics. He also served on the FEI Graduate Students Committee and Web-Site Committee. He was the faculty supervisor of the Soil Mechanics Laboratory. He was assigned academic advisor to second year undergraduate students (Class of 2008).

Bilal Hamad was the President of the aei Lebanon Chapter. He assisted the President of the Order of Engineers in representing the Order at the meetings of the Parliamentary Committee of Public Works and Transport designated to discuss seismic activity in Lebanon and propose means for emergency management.

Mohammad Harajli was a member of the Organizing Committee of Local Workshop for Expert’s Group on Earthquake and Tsunami Hazard, Lebanese National Council for Scientific Research (LNCNSR).

Mounir Mabsout was elected member of the board of the nce International Education Association (104).

Hedmi El Khatib, Mohamad Harajli, and Salah Sadek were appointed, on behalf of FEI, as members on sub-committees of Libnor to set Lebanese standards.

George Ayoub interviewed for broadcasting station Voice of Lebanon on status of wastewater treatment in Lebanon. He was an invited speaker at the Information Seminar, Le semide et le Secteur de l’Eau au Liban, presentation entitled Development of Tools and Guidelines for the promotion of Sustainable Urban Wastewater Treatment and Reuse in Agricultural production in the Mediterranean Countries (November 10, 2005).

Mutasem El-Fadel served as advisor on transport infrastructure; International Department task team (secretary) and on the Strategic Planning Committee for Friends of Abel Al.

Assessment in the Oil and Gas Industry; Lacco, Saudi Oger on Environmental management plans for the Surveys Development Project, Agiba, Jordan; Abu Dhabi National Energy and Bureau Veritas as Expert judge on the UAE Health, Safety and Environment Competition; Société Générale Immobilère on Environmental Assessment of the Raouche Rotana Complex, Beirut, Lebanon; Rafic El Khoury and Partners as expert on environmental impact assessment in the water sector in Lebanon.

Bilal Hamad was consultant for: Oger Liban as expert to perform technical control and review of the structural design of the new Saudi Arabia Embassy, Beirut, 2005; consultant to perform supervision of the repair and strengthening procedures of Chekka Tunnel, North Lebanon, 2006; and Khoralfi Contracting as expert to perform structural evaluation and recommend seismic strengthening procedures of the building in Lot 365, Mina El Hosn, Beirut.

Isam Kaysi was consultant for: Dar Al-Handasah (Shair and Partners) as senior transportation advisor; Millennium Development & SETS as advisor on transport infrastructure; International College (IC) as Advisor on parking, access, and traffic impact (IC Master Plan).

George Ayoub was a member of the Scientific Committee for Friends of Abel Al.

George Ayoub was a consultant for: Rafic El Khoury and Partners as expert on state of the art report of Lot 366, Mina El Hosn, Beirut.

Khatib and Alami for expert advice on the design of wastewater treatment plant for the City of Tabuk, Saudi Arabia.

Bilal Hamad was a consultant for: Rafic El Khoury and Partners as expert on state of the art report of Lot 366, Mina El Hosn, Beirut.

Mutasem El-Fadel was a consultant for: Dar Al-Handasah (Shair and Partners) as senior transportation advisor; Millennium Development & SETS as advisor on transport infrastructure; International College (IC) as Advisor on parking, access, and traffic impact (IC Master Plan).

Journal Publications


Book Chapters

Conference Proceedings

Conference Chair:

Kaysi, I. Program Committee Co-Chair, IEEE ITS’ 2006 Conference in Toronto; Editorial Board Member of Transportation Research - Part C: Emerging Technologies; Editorial Board Member, Journal of Intelligent Transportation Systems; Editor, Public Transportation Management and Electronic Payment - IEEE ITS’ 2006 Conference in Toronto; Editor, IEEE Transactions on Intelligent Transportation Systems.

Research Reports

Research Funding
University Research Board (URB) & Lebanese National Council for Scientific Research (LNCSR)
Assaf, H. "Integrated water, energy, and environmental knowledge system (WEKES) using GIS technology," UBR, $5,000.
Bashe, M. "Extension to contaminant transport in water distribution systems," UBR, $2,000.
Hamad, B. and Harajli, M. "Effect of FRP Confined on the bond strength of steel bars under static and seismic loading: application of exterior beam-column connections and gravity load-designed columns," LNCSR, LL 12,000,000.
Kaysi, I. "Evaluation of motorist information systems for border crossings," UBR, $5,000.
Sadek, S. "Liquefaction of silty sands," UBR, $5,000.
Sadek, S. and Mabrouk, M. "Finite element-based design methodology for buried infrastructure pipes," LNCSR, LL 8,000,000.

Other Sources
El Fadel, M. "Community development project: pilot demonstration in North Lebanon," COR, and World Bank, $102,000.
Chahdar, N., El Fadel, M., Karaki, S., Meshir, T., and Moukalled, F. "Renewable energy policy options for economic improvement in disadvantaged rural areas - Phase II," Global Network for Sustainable Development (CENSUS), $25,000.
Harajli, M. "Open and fully compatible strengthening system for heritage buildings in the Mediterranean region (OPENHERE)," European Commission (EC), $120,000.
Kaysi, I. "Container terminal operations," Beirut Container Terminal Consortium (BCTC), $250,000.

Thesis Supervision
Hamed Assaf supervised the master students Muheiddine Kabbani and Linda Khalil (wreq); and co-supervised the PhD candidate Mark Saadeh (Technical University of Aachen, Germany).
George Ayoub supervised the master students Oussama Kobessy and Mary Semaan (wsem).
Habib Basha supervised the master students Rayan Bsat and Ali Dib (wreq) and co-supervised the PhD candidate Manal Hatem-Musssale (University of Newcastle upon Tyne, UK).
Mutamse El Fadel supervised the master students Fadi Matar (wreq), Michele Harfouche, Safaa Murad, Darine Salam (etps), and Lea Kai (cs); and co-supervised the master students S. Ali-Mabrouk, G. Azar, S. Haji and D. Sarkis (cs).
Bilal Hamad supervised the master students Charbel Bou Abs and Faten Ibrahim; and co-supervised the master student Aline Khawaji (ct).
Mohammad Harajli supervised the master students Mohammad Abou Niag, Farid Dagher, and Zenab Khalil (cs).
Isam Kaysi supervised the master students Nada Chehab, Rawd Hani, Serene Saab (cs), Rayan Khraibi (etps), Alice Kam (University of Toronto, Canada), and co-supervised the PhD candidate Marianne Kazopoulos (University of Toronto, Canada).
Mounir Mabrouk supervised the master students Firas Bou Diab, Fatima El Meski, and Sako Holsan (cs); co-supervised the PhD candidate Khaled Shihabi (Damascus University, Syria).
Sahal Sadek supervised the master students Antoine Abboud, Fadi Freiba, Aline Khawaji, Ramzi Ramadan, Nadim Rouhana, and Maha Saleh (cs); co-supervised the master students Charbel Bou Abs (cs) and Joy Jadam (Agriculture).

four | Academics
Courses Offered
The following table includes the civil engineering courses offered by the department during 2005-06, along with the related information on enrollment and instructors.

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New & Restructured Courses

During the past two years, the following courses were introduced to the program or taught for the first time:

- CIV 501/2 Final Year Project - FYP, 0/3 cr, UG (2004-05 & 2005-06)
- CIV 647 GIS for Water Resources & Environmental Engr, 3 cr, GR (Spring 2005 & Spring 2006)
- CIV 797 Spec Topics: Fiber Reinforced Cementitious Composites, 3 cr, GR (Spring 2005)
- CIV 798 Special Topics: Reliability-Based Design of Civil Engr Systems, 3 cr, GR (Spring 2006)

It is worth noting that most CE courses currently include substantial computer applications/ implementations and web-based instruction/information (WebCT). In addition, an AutoCAD
drafting lab was added as a component in the cive 311 - Structures I course; a formal course on drafting (cive 310) was replaced by Engg 300). This addition will be introduced to the cive curriculum at the first-year level staring 2006-07.

Curricular Changes (2006-07)

A restructuring of the cive undergraduate curriculum was adopted, following an evaluation of the program by the department. The changes were introduced to better meet the objectives and satisfy the outcomes of the program, while remaining in line with ABET criteria. The revised curriculum will start with the new first-year students effective Fall 2006-07. The modifications adopted, namely in the first two years, are summarized below:

- **cive 200 - Introduction to Civil Engineering (2 cr)** replaces cive 300 - Perspectives in Civil Engineering (2 cr) and astt 200 - Introduction to Engineering (3 cr).
- **cive 210 - Statics (3 cr)** replaces cive 210 - Engineering Mechanics (Statics and Dynamics; 4 cr).
- **phys 210 - Introductory Physics (3 cr)** is revised to include substantial components of Dynamics and Thermodynamics.
- **ece 210 - Electric Circuits (3 cr)** replaces ece 210 - Circuits and Electronics (4 cr).
- **ece 230 - Introduction to Programming (3 cr)** replaces ece 330L - Computers and Programming (4 cr).
- **mech 320 - Engineering Graphics (1 cr)** is new.
- **cive 320 - Construction Materials and Technologies (2 cr)** replaces cive 320L Construction Materials (1 cr).
- **stat 230 - Introduction to Probability and Random Variables (3 cr)** replaces astt 310 - Probability and Statistics (2 cr), and will be offered by the Math Department.
- **Math 251 - Numerical Computing (3 cr)** and one Math elective (Math 212, 218, 281, or approved; 3 cr) replace ASST 312/313 - Applications of Analytical Methods in Engineering I/II (3 cr) 3 cr.

The following modifications were also adopted at the senior undergraduate and graduate levels as of Fall 2006-07, and will apply to the current senior students.

- **cive 501/502 - Final Year Project (1 cr/3 cr)**: one credit has been added to cive 501 (Part 1) which was originally zero credit. cive 502 (Part 2) remains 3 cr.
- **cive 581 - Specifications and Cost Estimation (3 cr)** is introduced as a senior undergraduate elective and is cross-listed with enmc 303.
- **cive 672 - Introduction to Geographic Information Systems (3 cr/3 cr)**, previously offered as astt 672, is part of the pool of the cive graduate courses which can be taken as a senior undergraduate elective, and remains open to other programs and majors at the graduate level.

With the modifications above, the program will be maintained at the original 143 credits.

Final Year Projects

The Final Year Project - FYP (cive 501/2) was introduced as a requirement in the cive curriculum for the first time in 2004-05, in line with ABET requirements. Teams of students were formed and the following projects were submitted and presented during 2005-06.

**Elevated Freeway**

Students: Nicolas Belhazr, Mohamed Itani, Elias Nehme, and Marc Rashed

Faculty Supervisor: Mourir Mabsout

The project presents a solution to the heavy traffic on the highway strip between Dbayeh and Beirut. It involves structural and highway design while taking into consideration the effect on the existing structures, environmental concerns, and economic feasibility.

**Beach Complex Resort**

Students: Maya Abi Aed, Mohamed Al Jourdi, Jean Paul Akiki, and Michael Daher

Faculty Supervisors: Bilal Hamad and Mohamed Harajli

The project includes architectural and structural designs (chalet, offices, ...), geotechnical issues, and breakwater design.

**Design Enhancement of Bisri Dam**

Students: Souda Al Sarraf, Nicolas Ziadeh, and Christiane Zogbi

Faculty Supervisor: Habib Basha

The project consists of a study of an existing dam design (Nahrain Al Awali dam project) and covers both risk assessment (dam behavior to earthquake and flooding) and implementation of new features based on GIS (flow modeling). A historical overview of the project is also included.

**Green Village**

Students: Hani Bou Nasr, Bahjat Dagher, Lea Diab Maalouf, Elie Kmeid, and Mohamad Yassine

Faculty Supervisor: George Ayoub

The project’s idea involves choosing a village in Lebanon and planning all the infrastructure and facilities pertaining to it. This includes road, network, water supply and distribution system, wastewater retrieval (and possibly treatment) system, electrical distribution system (and possibly supply), and even architecturally beautifying the village by adding trees.

**Development of Kleiat Renee Mouawad Airport**

Students: Tamam Al Dandachi, Joseph Betour El Zogbi, Ahmad El Harake, Fadel El Samman, and Jacques Khority

Faculty Supervisor: Mutassem El Fadil and Isam Kaysi

The project consists of the design of a new passenger terminal at Kleiat Airport in North Lebanon with a single runway having the potential of attracting local and international airlines in an area where the effect of wind on arriving and departing aircrafts is minimal. The implementation of this project is to have a positive economic impact in the area.

**Metro System in Greater Beirut Area**

Students: Elie Kharrat, Toufic Ramia, George Tohme, Jamil Zakhem, and Maria Zeghayar

Faculty Supervisor: Isam Kaysi

The project consists of defining the study area, data collection, modeling, and forecasting. It covers the design of the tunnels, rail system and the stations through which the metro will pass. The project includes structural design, transportation aspects, economics, and construction management.

**3D Visualization of the Subsurface for Foundation Design**

Students: Miled Chalfoun, Husein El Harri, Hrag Karafoglanian, and Mazen Rammal

Faculty Supervisor: Hamed Assaf

The project consists of developing software that comprises two parts. The first part resides in generating a computer model of the terrain out of the borehole logs and possibly establishes the soil characteristics. The second step is in designing the best foundation according to the soil model generated and according to criteria selected by the operator. The code will be designed in a modular function in order to be able to add modules that would add its ability to add multiple design features and new foundation types in the future without affecting the code itself.

**Beirut Rafic Hariri International Airport A380 Adaptation Challenge**

Students: Ralph Bou Khalil, Jamil Daou, Radwan Nayef, and Alexander Rizkallah

Faculty Supervisor: Salah Sadek

The project includes a new airport master plan, plane parking facilities and gate usage, and the rehabilitation of the runway to sustain the A380 load requirements.

**Implementation of Railway between Beirut and Roumieh**

Students: Bassam Abou Rabea, Rawad Jamal, Nakhte Mansour, and Jad Tabbara

Faculty Supervisor: Isam Kaysi

The project consists of a preliminary design for the railway considering horizontal and vertical alignments, side of way, and other transportation consideration. The project includes a brief feasibility study involving economic and managerial issues. Environmental and social problems are also discussed.
The project consists of a design of a reinforced concrete parking structure in downtown Beirut, taking into account transportation considerations. An investigation of the parking needs in the area was conducted, and a feasibility study involving economical and managerial issues is presented.

**Graduate Theses Approved in 2005-06**

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<td>S. Sadek (M. Mabsout &amp; B. Hamad)</td>
<td>Developing Bearing Capacity Factors for Foundations on Multilayered Soils Using the Finite Element Method</td>
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<td>M. El Fadel (I. Nuwayhid, N. Saliba &amp; A. Cheradah)</td>
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<td>CE</td>
<td>B. Hamad (M. Harajli &amp; G. Ayoub)</td>
<td>Effect of FRP on Bond Strength of Hooked Bar Anchors in Normal Strength Concrete Structures</td>
<td>10/05</td>
</tr>
<tr>
<td>Farid Dagher</td>
<td>CE</td>
<td>M. Harajli (M. Mabsout &amp; S. Sadek)</td>
<td>Effect of FRP Confinement on Seismic Behavior of Gravity Load-Designed Columns</td>
<td>10/05</td>
</tr>
<tr>
<td>Ramzi Ramadan</td>
<td>CE</td>
<td>S. Sadek (B. Hamad &amp; I. Kaysi)</td>
<td>A GIS-Based Landslide Hazard Framework for Road Repair and Maintenance</td>
<td>10/05</td>
</tr>
<tr>
<td>Antoine Abboud</td>
<td>CE</td>
<td>S. Sadek (M. Harajli &amp; M. Mabsout)</td>
<td>Shear Strength Evaluation of Fiber-Reinforced Cement-Stabilized Sands</td>
<td>11/05</td>
</tr>
<tr>
<td>Charbel Bou Abs</td>
<td>CE</td>
<td>B. Hamad (M. Harajli &amp; S. Sadek)</td>
<td>Effect of FRP on Bond Strength of Hooked Bar Anchors in High Strength Concrete Structures</td>
<td>2/06</td>
</tr>
<tr>
<td>Serene Saab</td>
<td>CE</td>
<td>I. Kaysi (M. Mabsout &amp; M.A. Abdul Malak)</td>
<td>The Competitiveness of Beirut Container Terminal and its Prospects of Transshipment</td>
<td>4/06</td>
</tr>
</tbody>
</table>

five | Department Initiatives & Activities

Academic and research initiatives were notable in the CEE Department during 2005-06. These included in particular the initiation of the Transportation Research Unit (TRU) and the launching and activation of a world-class Strong-Floor/Reaction-Wall for dynamic/earthquake testing in the Structural and Materials Laboratory.
Civil Engineering Seminars & Lectures

The Seminar Series in Environmental Engineering and Science (civcsc 690) was offered to the civil & environmental engineering department during the spring of 2006, and was open to the public. The seminar series was coordinated by Dr. Mounir Mabsout, cee Department. Other seminars and lectures were presented during 2005-06.

- "Deep Foundations Quality Control and Quality Assurance Testing Methods" by Dr. Mohamad Hussein; Vice President, cee Engineers, Inc., Orlando, Florida, USA, Partner, Pile Dynamics, Inc., Cleveland, Ohio, USA; Chairman, Deep Foundations Committee, American Society of Civil Engineers. July 20, 2005.
- "The Importance of Reliability Analyses in Structural and Geotechnical Engineering" by Dr. Shadi Najjar; Lecturer, cee Dept, AUB. December 8, 2005.
- "Structural Health Monitoring and Field Testing of Civil Infrastructures" by Dr. Hani Nassif; Associate Professor, cee Department, Rutgers, the State University of New Jersey. January 5, 2006.
- "Introduction to Civil and Environmental Engineering" by Dr. Salah Sadik, Associate Professor, cee Department, AUB. February 16, 2006.
- "Managing Safety in the Construction Industry" by Dr. Fadi Hamdan; Lecturer, cee Department, AUB. April 20, 2006.
- "Simulation Tools for Infrastructure Monitoring and Management" by Dr. George Turkvi; Visiting Faculty, Computer Science, AUB. May 11, 2006.
- "ITTC: A 15-yr Retrospective and Looking Ahead" by Dr. Ham Mahmassani; Professor of Transportation, University of Maryland. May 26, 2006.

Field Trips

Field trips were organized by the cee faculty with the objective of exposing students to the real life experiences in the practical civil engineering world. Visits to the projects, offices, and plants (listed below) were also aimed at enhancing student learning in specific courses.

- [1] Dar Al Handash (Resources and Environment Department) 
  Accompanying Faculty: Dr. Habib Basha 
  Course/Class: cive 440 (Hydraulics and Laboratory), cive 640 (Hydraulic Structures), cee 2007 (3rd year students), and Graduate Students 
  Date: December 20, 2006 
  Aim: to attend a presentation of dam projects in Algeria and Angola. 
- [2] Container Terminal at the Port of Beirut 
  Accompanying Faculty: Dr. Isam Kayy 
  Course/Class: cive 491 (Transportation Engineering and Laboratory), and cee 2007 
  Dates: May 2006 
  Aim: to familiarize students with operations at the Container Terminal.

Educational Movies

A number of educational movies on various civil engineering topics were shown as part of the cive 2007 course (Perspectives in Civil Engineering) during the spring of 2006. The purpose of the course was to introduce 1st year cee students to the world of civil engineering. The movies were attended by various cee classes. Discussions followed the showings, moderated by cee faculty members. The course and movies (listed below) were coordinated by Dr. Mutaseem El-Fadel, cee department.

- [1] "Three Gorges: The Biggest Dam Construction in the World" (Discovery Channel) 
  Moderator: Dr. Hamed Assaf. February 23, 2006
  Moderator Dr. Mourad Maboub. March 2, 2006
  Moderator: Dr. Mohamed Harajli. March 9, 2006
- [4] "Tunneling" (Discovery Channel) 
  Moderator: Dr. Salah Sadek. March 16, 2006
  Moderator: Dr. Habib Basha. March 23, 2006
- [6] "The Search for Clean Air" (University of North Carolina, Center for Public Television) 
  Moderator: Dr. Mutaseem El Fadel. March 30, 2006
  Moderator: Dr. Bilal Hamad. April 6, 2006

Enrollment

In the fall 2005, 233 (351 undergraduate and 42 graduate) students were enrolled in the cee department distributed as follows:

<table>
<thead>
<tr>
<th>CLASS</th>
<th>YEAR 2005-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive English</td>
<td>10</td>
</tr>
<tr>
<td>Undergraduate 1st Year</td>
<td>75</td>
</tr>
<tr>
<td>Undergraduate 2nd Year</td>
<td>72</td>
</tr>
<tr>
<td>Undergraduate 3rd Year</td>
<td>51</td>
</tr>
<tr>
<td>Undergraduate 4th Year</td>
<td>43</td>
</tr>
<tr>
<td>Graduate-ce</td>
<td>16</td>
</tr>
<tr>
<td>Graduate-ewre</td>
<td>12</td>
</tr>
<tr>
<td>Graduate-et</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>293</td>
</tr>
</tbody>
</table>
Graduate Assistantships (GA) were granted to 9 students in summer 2005, 24 students in fall 2005, and 22 students in spring 2006. GA tasks included assisting in courses and in lab teaching and lab operations, as well as in various departmental tasks such as assisting in proctoring exams, preparing reports, and academic activities, as listed below:

**UNDERGRADUATE STUDENT-WORK SCHOLARSHIPS**

During the year 2005-06, 16 undergraduate students from various majors and classes across Fea and Aub worked in the Cee laboratories and department. The students were assigned mainly to the Soil Mechanics Laboratory to assist in testing; 2 students worked on the CEE and faculty websites; 4 students assisted in CAD Lab sessions. The average working time funded was 5 hours per week.

**Graduation UNDERGRADUATE STUDENTS AND DISTINCTION**

Thirty undergraduate students were granted the Bachelor of Engineering (BE) degree, major Civil Engineering (CE), three with distinction and one with high distinction.

Eleven graduate students were granted the Masters of Engineering or Science (MEng or MS) degree, major Civil Engineering (CE), Engineering and Water Resources Engineering (EWRE), or Environmental Technology (ET), during 2005-06.

**Civil Summer Camp 2006**

The Civil Summer Camp 2006 was a modest experiment. The activity was jointly conducted and co-funded by the Economic and Social Fund for Development (ESFD) at the Council for Development and Reconstruction (CDR). Beyond the initial connection made by the Civil Engineering Department with ESFD, the students, through the Civil Engineering Society (CES), took it upon themselves to organize and coordinate the entire activity with the parties involved.

The camp consisted of a one-week, community development project in the remote village of Mishmish in the upper Akkar region. Fifteen Civil Engineering (CE) students volunteered during their break between spring and summer terms to spend time assisting in public works, construction of a health-care center, and a center for agriculture development in the village. The students got further involved by offering review lessons and classes to a large number of Brevet students in preparation for the official government exams, as well as in the clean-up of a forest with a team of village scouts. The camp began with specialized workshops for the students organized on site by ESFD. At the local level, the link was the Mishmish Municipality which coordinated and organized the “on-the-ground” activities.

The project helped meet the objectives of the two partners, the ESFD and the CEE/CES. For ESFD, this project promoted their activities in community development and gave credible visibility to the on-going work on development issues. The project also falls within the ESFD methodology of Community Development which maintains continuous support for its partner communities and helps them mobilize resources to help them in the implementation of community development projects. At the same time, the project helped a group of Civil Engineering students: acquire some civil engineering related experience by helping in public works; get involved in community development projects and be exposed to local development issues; acquire responsibility, maturity and discipline; encourage participation in civil society through partnership between youth and community groups; and encourage volunteerism as non-profit, non-wage and non-career action for the well being of the community or society at large.
bird project

This year, 2005-06, is the third academic year during which the Engineering Management (EM) Program implemented the new program structure and curriculum offering. The new program has four areas of concentration: Financial Engineering, Industrial Management, Projects and the Built Environment, and Information and Organizational Management. The program has continued to attract qualified students from architecture and engineering majors and a modest number of applications from other majors including computer science, business, physics, and information systems. The enrollment in the program has increased to about 100 students, reflecting around a twenty percent increase from the average of the last five years.

This year two major initiatives were completed: the offering of the engineering management master’s degree with a thesis and a non-thesis option, and the introduction of a minor in engineering management for undergraduate students. Both initiatives received the approval of the concerned N&U and University boards and committees. They will be implemented effective fall term 2006.

Under the non-thesis option, the Master of Engineering Management (MEM) degree requirements will remain the same, with the exception that the students will have to complete a total of 36 credits instead of the previous requirement of 35. This is achieved by relinquishing the “Project” requirement, while keeping an opportunity for those who may opt to undertake research work of a limited scope to take the EMNC 797 Special Project course, which can be used to satisfy the 3-credit requirement of any elective depending on the nature of the topic addressed. Under the thesis option, students will be required to complete a total of 36 credits, subdivided as follows: four core courses (12 credits), three courses from the student’s area of concentration (9 credits), one free elective course (3 credits), and a thesis (6 credits). The merits of these approved changes are expected to include:

- [1] offering students the opportunity to complete the degree in one year (non-thesis option);
- [2] receiving feedback from those who have less interest in research work from having to fulfill the project requirement, thereby students can finish their degrees faster and reducing project supervision load on full-time members of the EM group;
- [3] initiating a career-oriented industry professionals (non-thesis option);
- [4] ability to better recognize students’ effort resulting in substantive research work (thesis option);
- [5] improving the research output of EM faculty;
- [6] and paving the way for a PhD program in the future.

The minor in engineering management is aimed at allowing undergraduate engineering and architecture students, as well as students from related majors, to pursue an engineering management concentration starting as early as the fall semester of their third year. To satisfy the requirements of this approved minor, a student must earn 18 credits of course work as follows:

- [1] At least nine out of the total requirements of 18 credits shall be fulfilled from the undergraduate EM course offerings, which shall include the EMNC 400 course.
- [2] The other nine credits can be satisfied by taking courses either from the undergraduate or the elective graduate course offerings.

Finally, the program joined the Engineering and Technology Management Education and Research Council (ETMERC), a forum that was recently formed in order for heads of engineering and technology management (ETM) programs and departments to address issues facing the ETM community. ETMERC operates as an integral part of and under the auspices of the Portland International Center for Management of Engineering and Technology (PICMET) and has as objectives the promotion and improvement of higher education and research in Engineering Management and Technology Management.

<table>
<thead>
<tr>
<th>Faculty</th>
<th>FULL-TIME FACULTY MEMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor and Coordinator EM Program, Mouсен Salameh; Professor, Toufic Mezher; Professor, Khalil Hindi; Professor, Bacel Maddah; Assistant Professor, Walid Nasrallah; Assistant Professor.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PART-TIME FACULTY MEMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samir Traboulsi; Senior Lecturer, Akram Tannir; Lecturer, Hassan Charif; Lecturer, Youssif Nizam; Instructor, Walid Abi Lamaa; Lecturer, Maher Al Ajam; Instructor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Staff</th>
<th>SECRETARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maya Kouzi</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>three</th>
<th>Faculty Research &amp; Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refereed Journals, Book Chapter</td>
<td></td>
</tr>
</tbody>
</table>

| Conferences |
| Salameh, M., “Automated Generation of the University Calendar,” the 52nd Annual Conference of the Association of Collegiate Registrars and Admissions Officers (AACRAO), San Diego, April 17-20, 2006. |

| INVITED INTERNATIONAL PRESENTATION |

| Funded Research |
| Toufic Mezher; “Integrated Water, Energy, and Environmental Knowledge System (WEEKS) Using GIS Technology,” URB, [$14,500], “WIND PROJECT,” TEMPUS, [$15,000] |
Committee Service

Professor Mohamad-Asem Abdul Malak; Member of the: Public Policy and International Affairs Institute Committee; University Employee Benefits Committee; University Promotion Committee at the BSO level; University Search Committee: Director of Physical Plant; FE(A) Strategic Planning Committee; FE(A) Space Planning Committee; FE(A) Administrative Committee.

Professor Toufic Mezher; Member of the: University Senate, Senate Committee on Faculty Affairs, FE(A) Research Committee, Energy Research Group.

Professor Khalil Hindi; Member of the: OSA Advisory Committee, Graduate Studies Committee, Academic Committee, Curriculum Committee, Administrative Committee, University Board of Graduate Studies (chair), University Strategic Planning Committee for Graduate Education and Research (chair), University Strategic Planning Steering Committee.

Professor Bacel Maddah; Member of the: FE(A) Graduate Studies Committee, FE(A) Students Affairs Committee.

Professor Walid Nasrallah; Chair: FE(A) Student Affairs Committee.

Professional Activities

Professor Mohamad-Asem Abdul Malak; Technical Advisor, Facilities Planning and Design Unit, AUB.

two | Academics

Graduate Thesis Supervision

<table>
<thead>
<tr>
<th>STUDENT</th>
<th>PROJECT TITLE</th>
<th>SUPERVISOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sami M. Kamal Azhari</td>
<td>The Use of Historical Overhead Costs for Estimation and Control Purposes in Future Construction Projects</td>
<td>Mohamad-Asem Abdul Malak</td>
</tr>
<tr>
<td>Mireille Manoukian</td>
<td>Development of a Life-Cycle Cost Model for a MSW Treatment Facility</td>
<td>Mohamad-Asem Abdul Malak</td>
</tr>
<tr>
<td>Walid Karel</td>
<td>Professional Liability in the Lebanese Construction Industry</td>
<td>Mohamad-Asem Abdul Malak</td>
</tr>
<tr>
<td>Samer El-Masri</td>
<td>Earned Value Analysis Applied to Concrete Construction</td>
<td>Mohamad-Asem Abdul Malak</td>
</tr>
<tr>
<td>Majd Khalaf</td>
<td>The Use of Material Forward Planning Process with a 3D Control Environment in Large Mechanical Projects</td>
<td>Abdul Malak</td>
</tr>
<tr>
<td>Fehmi Raouf</td>
<td>Data Model For Cost Schedule Integration</td>
<td>Toufic Mezher</td>
</tr>
<tr>
<td>Rony Antoun</td>
<td>Cultural Impact on Quality Management Systems: The Case of Dar Al-Handasah</td>
<td>Toufic Mezher</td>
</tr>
<tr>
<td>Michel El Azar</td>
<td>The Impact of The Telecommunications Regulatory Authority in Lebanon on the Mobile Communication Sector</td>
<td>Toufic Mezher</td>
</tr>
<tr>
<td>Pierre El Khoury</td>
<td>The Use of Natural Gas for Power Generation in Lebanon: Analysis and Proposed Solutions for the Bedawi and Zahrani Power Plants</td>
<td>Toufic Mezher</td>
</tr>
<tr>
<td>Hilal Itani</td>
<td>Human Resource Management in the Lebanese Construction Industry</td>
<td>Toufic Mezher</td>
</tr>
<tr>
<td>Mohamed M. Kara</td>
<td>Balanced Scorecard Implementation: Lessons Learned, 2006</td>
<td>Toufic Mezher</td>
</tr>
<tr>
<td>Mohammad Khaled</td>
<td>Toward Building A Knowledge Management System in a Design Firm: The Case of Khatib and Alami Structural Department</td>
<td>Toufic Mezher</td>
</tr>
</tbody>
</table>

Courses Offered

FALL TERM 2005

| ENMG 400 | Engineering Economy; Instructor: Yousef Nizam |
| ENMG 400 | Engineering Economy; Instructor: Bacel Maddah |
| ENMG 501 | Engineering Management II; Instructor: Moueen Salameh |
| ENMG 502 | Engineering Management II; Instructor: Samir Traboulsi |
| ENMG 502 | Construction Management; Instructor: Mohamad-Asem Abdul Malak |
| ASST 520 | Contemporary Issues in Technological and Engineering Ethics; Instructor: Toufic Mezher |
| ENMG 601 | Management Theory; Instructor: Toufic Mezher |
| ENMG 602 | Introduction to Financial Engineering; Instructor: Khalil Hindi |
| ENMG 617 | Engineering Management Statistics; Instructor: Akram Tannir |
| ENMG 621 | Stochastic Models and Applications; Instructor: Bacel Maddah |
| ENMG 632 | Engineering Project Management; Instructor: Mohamad-Asem Abdul Malak |
| ENMG 640 | Sustainable Development Management; Instructor: Hasan Charif |
| ENMG 651 | Decision Support Systems; Instructor: Akram Tannir |

SPRING TERM 2006

| ENMG 400 | Engineering Economy; Instructor: Samir Traboulsi |
| ENMG 400 | Engineering Economy; Instructor: Toufic Mezher |
| ENMG 501 | Engineering Management II; Instructor: Yousef Nizam |
| ENMG 501 | Engineering Management II; Instructor: Moueen Salameh |
| ENMG 501 | Specification and Cost Estimation; Instructor: Mohamad-Asem Abdul Malak |
| ENMG 603 | Probability and Decision Analysis; Instructor: Walid Nasrallah |
| ENMG 604 | Deterministic Optimization Models; Instructor: Khalil Hindi |
| ENMG 623 | Stochastic Models and Applications; Instructor: Walid Abillama |
ENMG 624  Financial Engineering I; Instructor: Bacel Maddah
ENMG 633  Project Deliverance and Contracts; Instructor: Mohamad-Asem Abdul Malak
ENMG 638  Advanced Topics in Construction Management; Instructor: Walid Nasrallah
ENMG 653  Knowledge Management; Instructor: Toufic Mezher

SUMMER TERM 2006
ENMG 400  Engineering Economy; Instructor: Toufic Mezher
ENMG 400  Engineering Economy; Instructor: Youssef Nizam
ENMG 611  Supply Chain Design and Management; Instructor: Akram Tannir
ENMG 633  Advanced Topics in Project Management; Instructor: Mohamad-Asem Abdul Malak
ENMG 661  Strategic Management; Instructor: Toufic Mezher

five | Program Activities

Seminars & Presentations

six | Students

GA Appointments
The following were appointed as GAs for the academic year 2005-06. The list below shows the terms granted.

Mohamad El Kayaji; Fall 2005, Spring 2006, Summer 2006
Linda Shihabi; Fall 2005, Spring 2006, Summer 2006
Maya Itani; Fall 2005, Spring 2006, Summer 2006
Nada Matar; Spring 2006, Summer 2006
Nabil Nehme; Fall 2005, Spring 2006, Summer 2006
Nabil Machaka; Fall 2005, Spring 2006
Samer Saghir; Fall 2005, Spring 2006, Summer 2006
Rana Zaghdi; Fall 2005, Spring 2006, Summer 2006
Majd Khalaf; Fall 2005, Spring 2006
Hussein Rida; Fall 2005, Spring 2006
Samah Halawi; Fall 2005, Spring 2006
Reem Saab; Fall 2005, Spring 2006
Mazen Rashidi; Fall 2005, Spring 2006
Mohamad Faour; Fall 2005, Spring 2006
Rawia Mecherkany; Fall 2005, Spring 2006
Ali Mahmoudi; Fall 2005, Spring 2006
Cinderella Nuwayhid; Fall 2005, Spring 2006
Fouad Tarazi; Fall 2005, Spring 2006
Leila Fadlallah Yehia; Fall 2005, Spring 2006
Rami Sleiman; Fall 2005
Hani Zain; Spring 2006, Summer 2006
David Sayyah; Summer 2006
Elias Nehme; Summer 2006

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printing ▶ Anis Commercial Printing Press SAU