





school of engineering

the 1952 year book

American University of Beirut BEIRUT, LEBANON

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Directory of Students and Advertisements

The 1951-1952 School year witnessed the establishment of the Divison of Engineering at the American University of Beirut. The Engineering Student Society felt the need of appropriately recording this significant event. The increased importance of Engineering Education in a school with its own Dean, Faculty, building and specialized student body, in itself created the need for the continual recording of the activities of this new Division.

This publication, therefore, will serve as a major benchmark in what we hope will be a series of annual publications.

In this a long backsight is taken to the beginning of the study of engineering at A.U.B. with a glimpse of the stages by which it has advanced to the present.

The philosophy of the Division of Engineering orients us for a long foresight into the future of Engineering and Engineering Education in this area.

The long range need, however, is for the annual recording of the students and teachers working (and playing) together during the process of developing men to carry on and advance the profession of Engineering. Memories and mental images grow faint as the years pass. The faces of our classmates and teachers fade away. The satisfaction to be derived from renewing our acquaintanceships, if only through the medium of pictorial records, well compensates us for the sacrifices made to compile such records.

May this volume serve always to keep alive in each one of us of the class of 1952 a spark of the A.U.B. spirit acquired during our undergraduate days.

We hope that this will be the successful if unpretentious foundation of a continuing year book program.

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Published by Engineers' Council for Professional Development

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I AM AN ENGINEER. In my profession I take deep pride, but without vainglory; to it I owe solemn obligations that I am eager to fulfill.

As an Engineer, I will participate in none but honest enterprise. To him that has engaged my services, as employer or client, I will give the utmost of performance and fidelity.

When needed, my skill and knowledge shall be given without reservation for the public good. From special capacity springs the obligation to use it well in the service of humanity; and I accept the challenge that this implies.

Jealous of the high repute of my calling, I will strive to protect the interests and the good name of any engineer that I know to be deserving; but I will not shrink, should duty dictate, from disclosing the thruth regarding anyone that, by unscrupulous act, has shown himself unworthy of the profession.

Since the Age of Stone, human progress has been conditioned by the genius of my professional forbears. By them have been rendered usable to mankind Nature's vast resources of material and energy. By them have been vitalized and turned to practical account the principles of science and the revelations of technology. Except for this heritage of accumulated experience, my efforts would be feeble. I dedicate myself to the dissemination of engineering knowledge, and, especially to the instruction of younger members of my profession in all its arts and traditions.

To my fellows I pledge, in the same full measure I ask of them, integrity and fair dealing, tolerance and respect, and devotion to the standards and the dignity of our profession; with the consciousness, always, that our special expertness carries with it the obligation to serve humanity with complete sincerity.

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Dr. Stephen B.L. Penrose

THE PRESIDENT





HARVEY F. BATY Dean of Students



HAROLD W. CLOSE Dean of the Faculty of Arts & Sciences



ARCHIE S. CRAWFORD Vice President & Treasurer



FARID A. FULEIHAN Registrar



AZIZ K. NAHAS Superintendent of Buildings & Grounds



DAVID WILDER Librarian

to C. KEN WEIDNER first dean of the new school of engineering this book is dedicated



C. KEN WEIDNER

Dean of the Division of Engineering. Registered Professional Civil Engineer. Technical and Professional Education by tutoring. Entered the Profession in 1925 on general, heavy and railroad structures as Construction foreman then as Estimator and Superintendent then as Construction Engineer in Charge. 1931 joined the Engineering Dept. of Boeing Aircraft Company designer and liaison between design and manufacture. 1934 joined the Faculty of Whitman College Instructor in Physics and Superintendent of Buildings and Grounds. 1936 joined the staff of the University of Washington as Ass't. Superintendent of Buildings and Grounds. 1936 joined the staff of the University of Washington as Ass't. Superintendent of Buildings and Grounds including a continuous building program and complete utilities. Ordered to active duty as Lieutenant (Civil Engineer Corps) U. S. Navy in May 1941 served in American Theater and Asiatic Pacific Area, promoted through Lt. Commander and Commander to Captain, decorated twice with The Bronze Star. Released to inactive duty Dec. 1946. Gold medal for Distinguished Service, Society American Military Engineers 1946. Consulting Engineer Saudi Arabia and Professor, University of Oregon until Nov. 1947 when appointed Chief Engineer in charge of design and construction of the University of Chicago Argonne National Neuclear Research Laboratory. Upon completion of this assignment appointed Dean School of Engineering AUB Oct. 1951. Member, American Society of Civil Engineers. Member, National Society of Professional Engineers. Military Engineer Member, Society of American Military Engineers. Many other professional and scientific societies.









WALTER BAGGALEY



RAYMOND S. GHOSN







IBRAHIM ASAD KHAIRALLAH

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Instructing Staff

Fuad Amin Abdul-Malik

Lecturer in Civil Engineering. Chief City Engineer, Beirut Municipality B.A. A.U.B. 1917 B. Sc. in Civil Engineering, A.U.B., 1921. Up till 1923 and between College years, teacher, Contractor and Physical Education Director. Since 1923, with the Beirut Municipality, working his way up from Engineer to Chief City Engineer in 1945. Started Lecturing at A.U.B. in 1928.

Fadel A. Antippa

Assistant Professor of Physics. B.A. 1929 A.U.B. M.A. 1933 A.U.B. B. Sc. Hydroelectrical Engineering, 1938, University of California. Taught Physics and Engineering between his college years, and has been doing the same since graduation. Has done research on industrial electrochemistry, built and owned the first plastic moulding factory in the Near East. Consultant in Electricity and General Industries.

Walter Baggaley

Professor of Mechanical Engineering. M.E. Stevens Institute of Technology 1920. Tau Beta Pi and Sigma Nu. World War I in chemical warfare Service. Two college vacations lab. assistant New-York Testing Laboratories. Eight years field Engineer on construction of hydroelectric and steam power plants, twenty four years Project Engineer supervising design and construction of industrial plants. Two years in Soviet Union Building automobile plant, five years in U.S.A. building Atomic Energy laboratories. Member ASHVE, ASME, AIChE: Museum of Natural History Geology Club, Natural Science Club (Cleveland Ohio) and Earth Sciences Club, Chicago.

Raymond S. Ghosn

Associate Professor of Architecture and Civil Engineering. B.A. (1941), B.Sc. in C.E. (1945, A.U.B.), S.M. in C.E. (1946, M.I.T.), M. Arch. (1950, M.I.T.). Tau Beta Pi. Three years draftsman, designer, Assistant field Engineer, Architectural, Engineering offices (Lebanon, Egypt). One year Structural Engineer Designer, with architectural firm, Boston, U.S.A. Until joining A.U.B. Faculty, 1951, one year architectural designer, with Boston firm, cooperated on design of two buildings for Harvard University and Wellesley College. Part-time teacher at M.I.T. (Graphics Department). Critic in charge Final Year Architectural Design, Boston Architecture Center. Member A.C.I., Junior Member A.S.C.E., Associate M.S.A.A.

Edward S. Hope

Professor of Civil Engineering. A.B. 1923, Morehouse College. B.S. in Civil Engineering 1926, M.I.T. M.S. in Civil Engineering 1927, M.I.T. Ed D. 1942, Columbia University. Kappa Delta Pi. One year on highway construction and then three years as hydraulic engineer in Rio de Janeiro, Brazil. Twelve years Superintendent of Buildings and Grounds at Howard University. Commissioned by the Navy in 1944, became Director of Instruction, Navy Pacific University. Professor of Civil Engineering at Howard from 1947 till joining A.U.B. Faculty in 1951. Member — National Technical Association. American Society of Civil Engineers.

H. Kalayan

Instructor in Engineering. Engineer, Antiquity Restoration Department, Lebanese Government. B.A. 1931, A.U.B. B. Sc. Civil Engineering, 1946, A.U.B. Has been in the Antiquity Department since 1932, with the exception of four years 1938-1942 during which he taught in Cyprus. Did restoration work on Baalbek ruins, Crak de Chevalier, Djibail, Sea Castle of Sidon and others. Started part time teaching at A.U.B. in 1942.

Ibrahim Asad Khairallah

Lecturer in Engineering Law. Counselor at Law.Municipal Counselor, City of Beirut. M.A. 1910, A.U.B. Licence ès Droit 1916, Dijon University, France. L.L.B. 1927, Columbia University. Moslem Law at Al-Azhar 1915 and 1916. Taught at A.U.B. 1904-1909. Admitted to the Bar in New-York and Beirut, worked at Law Counseling since. Started lecturing at A.U.B. 1944. Helped draft Domestic Relations and Personal Status Law for Protestant and Christian communities in Lebanon. Awarded Order of Merit, by Lebanese Government.

presto all'enservest





ALIM W. MACKSOUD

NICOLA E. MANASSEH



JOHN W. RILEY







IVAN A. RUBINSKY

KHOSROV K. YERAMIAN

GARNETT L. WEIDNER

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Ivan A. Rubinsky

Associate Professor of Engineering. B.A., B.D. 1910, Kharkov Theological Seminary. Aeronautical Engineer 1915, Imperial Technical School of Moscow. Three years Manager and research worker at Imperial Air Force workshop, Moscow. Then for 6 years, worked with R.A.F. in Egypt, Cadastre Department in Lebanon and Syria and had a private practice. Since 1926 with the A.U.B., with one year as guest Professor at M.I.T. and another at Princeton. Has done research work on Aerodynamics, use of fiber glass in prestressed concrete and three dimensional projection and others. Designed a special pump for wind motor, an equation solving machine, dehydration plant.

Salim W. Macksoud

Acting Director, School of Agriculture B.A. 1940, A.U.B. B.Sc. 1945, A.U.B. Two years graduate work in Irrigation, University of California. Four years, Chief Inspector, in charge of Production and Irrigation — Syria — Lebanon, Local Resources Office, U.K. Royal Army Service Corps. 1947-1949, In charge ,Farm Management Course, A.U.B. 1949-1951, Assistant Professor of Irrigation and Water Supply. 1951, Acting Director, School of Agriculture, A.U.B. Consultant Engineer on Irrigation, Drainage and Farm Structures.

Nicola E. Manasseh

Associate Professor of Civil Engineering. B.A. 1927, A.U.B. B.Sc. in Civil Engineering 1931 — University of Michigan Licensed Surveyor, Government of Palestine. Worked four years with the University of Michigan Archeological Expedition in Iraq and Palestine. Then for ten years as a Civil Engineer in the Iraq Petroleum Company and since 1944 part time teaching at the University. Has a private Consulting Engineering practice and has been consultant to many large firms including the Iraq Petroleum Company, Tapline, Coca Cola, Arab Building Co., etc. Associate Member — American Society of Civil Engineers.

John W. Riley

Associate Professor of Civil Engineering. A.B. 1943, Stanford University.

M.S. in Civil-Sanitary Engineering 1948, Stanford University. Worked as Engineer for the U.S. Government for three years and for a Municipal Consulting firm for two, designing sewage treatment plants. Then joined a firm designing and building wood tanks and cooling towers. Joined A.U.B. Faculty in 1951.

Khosrov K. Yeramian

Associate Professor of Civil Engineering. B.A. 1927, A.U.B. B. Sc. in Civil Engineering 1930, Lafayette College. Has been part time teaching at A.U.B. since 1931, while carrying on his private practice in Architecture, Engineering and Contracting. This includes — B.C.W. Buildings, A.U.B. Library, Kassmiyi tunnels and Aqueducts, Barouk and Nahr el Barid tunnels, Azounieh Sanatorium, Cathedral in Antilyas and around 200 other jobs of houses, roads, bridges, etc.

Garnett L. Weidner

Lecturer in Fine Arts.

Bachelor of Fine Arts Degree from the University of Washington.

Taught and supervised Art.

Adult Art Education in recent years for American Association of University Women.

Research in Arts and Crafts of American Southwest Indians.



«It is by noble deeds that a man shall prosper in any land ».

At this Commencement you stand at the threshold of careers that may well shape the destiny of your societies and countries.

Yours is a rare opportunity. The needs for your services are so numerous and so urgent that you cannot fail to become influencial factors in the development of your communities.

As a graduate of this University you are charged with the responsibility of carrying forward a great liberal tradition. As a graduate of this School of Engineering you are charged with the responsibility of fulfilling to the utmost of your moral, mental and physical ability all of the requirements of the Profession you are now entering.

For you this is truly the Commencement. You have been accepted as junior members of one of the great professions of all time.

Its greatness stems from its unceasing efforts to improve man's lot. As members of this multi-national profession your first concern must always be the welfare of human society.

Hard honest work is the price you must pay for this privilege. Many times you will receive scanty financial payment for your efforts. But you will come to know that true satisfaction, dignity, pride and peace of mind and spirit will be the lasting payment you will receive.

It is your professional obligation to grow in every way. A true Professional Engineer is not only a sound technologist. He is also a cultured gentleman. He must himself be a true member of society if he is to understand and serve it.

Individual and professional growth must be out as well as up. Progress upward in your Profession will be conditioned by the rate of increase in the breadth of your general knowledge. Therefore the stability of your Professional progress upward will depend on your philosophical and cultural growth outward.

There will be many times when you will meet disappointment and discouragement. When this happens do not dwell on it; rather undertake a more difficult task. Remember that when defeat occurs in the mind there is no savior.

There will be many times when frustration will plague you. This you must meet with patience. It is the patient courage that waits for the opportunity it cannot create that produces greatness.

There will be many times when you will be faced with difficult decisions involving your ideals and the ideals of your Profession. It will take moral courage to make the right decision. Remember that self control is the chief element in self respect and that self respect is in turn the chief element in moral courage.

In the practice of your profession you will be required to demonstrate leadership constantly. Remember that leadership must be earned — it cannot be bought — it cannot be inherited — it must be earned. The talent of leadership is vital. Give its development your sincere attention.

Many of you will at times become unduly concerned about securing a safe future. When this happens remember that the most successful future any engineer can have is a lifetime of successful todays.

As you go forward into this new experience keep the words of Phillips Brooks in mind « Oh do not pray for easy lives — pray to be stronger men. Do not pray for tasks equal to your powers — pray for powers equal to your tasks. Then the doing of your work shall be no miracle — but you shall wonder at yourself and at the richness of life which has come to you by the Grace of God.»

« God be with you and bring success to your worthy efforts ».

C. Ken Weidner, dean

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LA VE ETTA MATCHINE

THE CLASSES

fourth year engineering

candidates to the B.S.C.E. degree





riad a. ahmad, B.A. (special) Beirut, Lebanon

farid s. anawis, B.A. (special) Kamishly, Syria



victor b. boulos, B.A. Haifa, Palestine

Member, Student Council '48-'49 Treasurer, Engg. Society '49-'50 Secretary, Engg. Society '50-'51

mufid dabaghi, B.A. Hasbayya, Lebanon

elias b. dabbas, B.A. Jaffa, Palestine

atallah i. doany, B.A. (special) Haifa, Palestine

papken djanjigian, B.A. Beirut, Lebanon

Secretary, Engg. Society '51-'52



abdallah r. ghazzawi, B.A. Beirut, Lebanon

President, Lebanese Boy Scouts Association '51-'52

rabah a. husseini, B.A. Jerusalem, Palestine

Member, Student Council '49-'50 President, Engg. Society '51-'52

faiz j. Jiha, B.A. Beshmezzin, Lebanon

richard mish'alany, B.A. Beirut, Lebanon Vice-President, Engg. Society '49-'50

haig k. mosgofian, B.A. (special) Beirut, Lebanon



michel s. nasir, B.A. Acre, Palestine

Member, Engg. Society Cabinet '50-'51 Vice-President, Engg. Society '51-'52

edmond pasha, B.A. Beirut, Lebanon

Member, Engg. Society Cabinet '51-'52

mohammad h. sa'di, B.A. Acre, Palestine

emile takla, B.A. Beirut, Lebanon

salah o. yamout, B.A. (Special) Beirut, Lebanon

third year engineering



edward balabanian Aleppo, Syria

berj bedrossian Beirut, Lebanon

christopher donabedian Ramallah, Palestine

salim fattal Aleppo, Syria



paschal s. habash Jaffa, Palestine







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laint yescubian

farid kandalaft Damascus, Syria

abdul-kadir kasti Beirut, Lebanon

ramez khabbaz Beirut, Lebanon











kamal b. khalaf Aley, Lebanon

kamal khuri Aley, Lebanon (Group Chief) (Lebanese Scouts Ass.) — '49-'52

sami khoury Jerusalem, Palestine

shafik kutran Haifa, Palestine

sadek kuwatly Damascus, Syria



muhammad a. malas Damascus, Syria







issam minkara Tripoli, Lebanon

raphael a. missirian (special) Beirut, Lebanon

albert a. ouzounian Beirut, Lebanon Member Student Council '51-'52

bahij saba Jerusalem, Palestine Treasurer, Engg. Society '51-'52 Drummer in C.A. and his Boys '49-'52











albert shabhar Tyre, Lebanon

daniel r. shidrawi Hadeth-El-Jobbee, Lebanon

pierre sioufi Aleppo, Syria

garbis a. tabourian Beirut Lebanon

Secretary, Bowling Club '49-'52 Associate Secretary, Engg. Society '51-'52

leon yacoubian Damascus, Syria

second year engineering



hagop ateshian Beirut, Lebanon Captain, E.S. Volleyball Team

hanna ayyoub Duma, Lebanon



author boshossion

salim t. azzam Haifa, Palestine

vartkes boghossian Aleppo, Syria isa farah Gaza, Palestine







muhammad s. fayyad Gaza, Palestine

sarkis garabedian Ras-el-Ain, Syria

amin ghurayyib Beirut, Lebanon











joseph iskandar Nazareth, Palestine Member, Student Council

munif jabbur Yabroud, Syria

jawad jawad Safita, Syria

munir jiha Beshmizzin, Lebanon

anis kaid-bey Ain-Anoub, Lebanon



barkev khojajian Aleppo, Syria



raymond kurkjian Tripoli, Lebanon

olvi I. mangasarian Bagdad, Iraq



zein mayyasi Haifa, Palestine Member, Engineering Society Cabinet









nizar mroweh Beirut, Lebanon

musa musa Baino-Akkar, Lebanon

hani nabulsi Jaffa, Palestine

nadeem n. nasr Hamati, Lebanon

munir i. nassar Ain-Ksour, Lebanon Captain, E.S. Baseball Team





nabil nassar Beirut, Lebanon

anwar s. rizk Broummana, Lebanon Member, A.U.B. Sports Committee

emile rizk Amioun, Lebanon

khalid shehadeh Tripoli, Lebanon











sarkis a. takhtajian Aleppo, Syria

karnik yacoubian Damascus, Syria

hampartzoum yenikomshian Beirut, Lebanon

varoujan zaven Duma, Lebanon

hrant zawzawadjian Beirut, Lebanon

first year engineering





michel abi saad Shikhane

michel s. abu-jawdeh Jourat al-Ballut, Lebanon

nadim abi samra Brummana, Lebanon

john ajamian Beirut, Lebanon







ali i. alamuddin Amman, Jordan

ollie james akel Kentucky, U.S.A.

varouj azadian Beirut, Lebanon International Basketball Player

samir badawi Beirut, Lebanon

victor bankoul Addis-Ababa, Ethiopia





roger chéhiré Paris, France

umar dabbagh Jaffa, Palestine

hisham dajani Jerusalem, Palestine Captain, E.S. Football Team

muhammad w. dajani Jaffa, Palestine

arthur daou Beirut, Lebanon

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sany a. farajallah Haifa, Palestine

shawki freiha Brummana, Lebanon



faruk ghorayyib Amman, Jordan

avedis y. guiragossian Beirut, Lebanon

munir halaby Shweir, Lebanon









wahib hamzah Abey, Lebanon

fakhri hazinah Jerusalem, Palestine

abdul-husayn al-hillawi Bagdad, Iraq

majid jishi ^{Bahrain}

yusuf joseph Beirut, Lebanon











antoine jumayyil Beirut, Lebanon

jirair I. kevorkian Jerusalem, Palestine Treasurer, Bowling Club

nabih majdalani Haifa, Palestine

mukhtar r. malas Beirut, Lebanon

gilbert mishalani Beirut, Lebanon











vasken najarian Beirut, Lebanon

sinan nashif Jaffa, Palestine

khalil nubani Jaffa, Palestine

hratch s. papazian Bagdad, Iraq

vahan c. piranian Beirut, Lebanon Manager, Physical Culture




albert sarrafian Beirut, Lebanon

ramiz h. sadaka Al-Munsif, Lebanon

rafik j. samaha El-Juar, Lebanon

william samman Mexico City, Mexico



jack I. sepilian Jerusalem, Palestine









nicolas f. shamma Ba'albeck, Lebanon

said shammas Homs, Syria

tarek shawwaf Hama, Syria

Manager, Varsity Basketball Team Member, Student Council

wadi tawk (special) Homs, Syria

vahé yacoubian Beirut, Lebanon





photos, b. bedrossian









STUDENTS ORGANIZATIONS AND ASSOCIATIONS

ENGINEERING HONORS

The Engineering Faculty has decided to provide a form of recognition for students who's performance is outstanding not only in scholastic attainment but in the other necessary activities that contribute to the making of a well-rounded professional personality.

The specific aim of the Engineering Faculty in recognizing outstanding achievement is «to encourage sustained effort for high scholarship and character development: scholarship being defined as academic accomplishment, and character as the embodiment of those moral qualities which are true attributes of a Professional Engineer». This distinction will be conferred upon undergraduates at the beginning of the last term of their Final Year and will be in the form of an engraved certificate and a distinctive emblem for personal wear.

The selection of candidates for this honor will be made by the Engineering Faculty without sollicitation on the part of the student. The selection will be based entirely upon the collective Faculty observations of the curricular, extra-curricular, and community attitudes and activities of the candidates.

The awarding of the emblem, prior to Commencement, will be probationary. The certificate awarded at Commencement will be confirmation of the successful termination of probation. The emblem will then become the unqualified personal property of the recipient.

Unfortunately, it is impossible to include in this issue the names of the first group of students receiving this honor. ENGINEERING STUDENT SOCIETY AND ITS ACTIVITIES

THE



a meeting of the cabinet

members of the cabinet

president : rabah husseini vice-president : michel nasir secretary : papken djandjigian treasurer : bahij saba assoc. secretary : garbis tabourian members : edmond pasha zein mayyasi

the cabinet

Our ruling cabinet this year is the one elected last year. This cabinet has proved to be the most active one our society has ever had in its short history. This undeniable fact must be attributed to its members, and their most appreciated sense of humour including Mr. Chairman. To this, a neutral observer might add that they were encouraged by the fact that the Engineering School has a special dean, new faculty, and daily progress in the construction of their building. Anyhow and whatever the motive and inspiration for its activities might be, the existing cabinet has functioned properly and done its best during this year. The following rough survey of our cabinet's activities would be the best witness to this. Yet to give an idea to our reader, the editorial board has committed the crime of appropriating the confidential minutes of one of the cabinet's meetings. The true copy of which reads:

Place: South East Corner of 108 Bliss.

It is 5:30 p.m. The voice of Chairman Husayni is heard:

«Wahyatak ya Zein, the meeting is called to order. Will the Secretary please read the minutes of the last meeting».

Hardly has the Secretary finished reading the minutes, when Edmond Pasha drops in, greets only the Faculty Advisor and takes a seat. He is ready to vote.

Garbis Tabourian has a list of suggestions to be carried out... by the other members.

- I suggest we give a present to Prof. Wilson on the occasion of his departure to the States.

- I suggest we have athletic teams organised.

- I suggest we have a trip.

At the word «trip» the Secretary, Djanjigian feels refreshed and,

- Would you like to make it a motion?

With his monopoly of the word «Suggest» Garbis answers:

- I suggest and move to have a trip to ...

- Its not the place but the company that counts says Vice-Chairman Michel Nasir.

Zein Mayyasi springs up from his seat and shouts:

- Let's do something! What is this? We are not doing anything.

- What would you suggest Mr. Mayyasi? Asks the Chairman.
- Something immediate, a film.

— «Will there be any cartoons shown?» asks Bahij Saba and starts humming — then remembering his Operetta rehearsal, «Let's hurry up ya Sheikh, I have the Chonita, it is taking lots of my time. Let's go. Shall I make a motion? here — I move to move».

- You mean to adjourn the meeting?

- Yes, something of that sort.

The motion is passed. The meeting is adjourned until next Tuesday at 5:30 in the same room.

society's activities

It would be quite difficult to give a full report of the many things achieved by our society and its cabinet throughout the whole year. The following survey is an attempt.

receptions

The Engineering Society started its successful career of this academic year by holding its first reception on Nov. 14, 1951 in West Hall's Common Room. This reception was held in honor of our Dean and Mrs. Weidner, and the new members of the Engineering Faculty. A short welcome speech was delivered by the Chairman of the Engineering Society to introduce the guests. Dean Weidner in replying to this gave his first speech to his student[§] pointing out the great need for engineers in this Arab World.

THE ENGINEERING STUDENT SOCIETY of the AMERICAN UNIVERSITY OF BEIRUT Requests the pleasure of your company at the DEAN & Mrs. WEIDNER bers of the Engineering Faculty in We Room on Wednesday HallC the fourter n filiu

photos b. bedrossian

«And we are here to produce them» was his conclusion. This was followed by shaking hands with all present and interesting table talks and group chats and finally tea.

A few months later on February 18, 1952, the second reception was held by the society on the occasion of Prof. R.A. Wilson's departure to the States. Prof. Wilson was without his khaki and with a necktie too. He stated: «Though the road of teaching was rugged at times, you have now proved it to be worth the trouble».

film and lecture series

In the cultural field of activities, our Engineering society was able to present a number of interesting lectures and films. During this current academic year, the following films related to the Engineering profession were shown:

1) November 30th, — A film about St. Paul's Cathedral, London. This well-known architectural antiquity was damaged during the last war due to Nazi air raids. The film describes structural repairs made on it.



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2) Another film, «River to Cross», demonstrating in detail all measurements and difficulties encountered in this engineering enterprise — especially those of vibrations in bridges.

3) December 14, a technicolor film of the Bechtel Tapline construction, «Oil Across Arabia». This film describes in detail the surveying and construction necessary to such a gigantic project as driving Arab oil from Dahran up to Saida on the Mediterranean, and thence, all over the world.
4) February 14th, the film, «Building a Better World», dealing with the excavation done by Caterpillar machines. The film was successful in demonstrating the results achieved when human science and labor are applied in the field of construction and production.

5) February 28th, «Precise Measurements for Engineers». The film describes amazing work done in determining the different accurate measurements of time and distance adopted in our Engineering world.

The Engineering Society, in making out the schedule of lectures for the year, tried to bring the students something new. Mrs. Garnett Weidner's talk on «Some Basic Art Concepts for Engineers.» was especially valuable to upper classmen who will not be able to take the Fine Arts course. The following is a resumé of Mrs. Weidner's talk:

«Art is universal. People, even in the least civilized state, have some art expression. It is as essential

as important and as inevitable as eating and sleeping. Crafts when developed to a sufficient perfection are Art in its highest sense.

For Engineers an understanding of Art principles and the history of Art can be of immeasurable value. Anything worth doing is worth doing well and doing beautifully. Whenever color is used it should be used in harmony and it can be used in such a way that it adds rather than detracts.

This Art knowledge can be a valuable foundation for personal development. It can help to develop an intelligent basis for choices. It creates a balance between the knowledge and «mental tools» necessary for Engineering practice and the enjoyment and enrichment of living. It very often can be a 'bridge' to opportunity in a professional career».

An anxious air-minded audience gathered in West Hall Societies Room one friday afternoon to hear Mr. Edward Dabbas, director of Communications of the Lebanese Civil Aviation Department, lecture on «Beirut International Airport— Problems and Solutions».

Basic design problems in the construction of Khaldeh Field were brought out and the solutions offered by the Civil Aviation Board were discussed. The facts which Mr. Dabbas revealed in his lecture assured some of the Lebanese Taxpayers that they got their money's worth in the largest, — L.L. 44,000,000 — enterprise ever undertaken by their government.

dances

The Christmas Ball proved a great success for the Engineers. «No more Tickets!» was the exclamation of everyone on the morning of December 22. One hundred and twenty-five tickets were already sold, and more would have been sold if West Hall space permitted. Cecil and the Boys started at 8:30 with a set of «slows», while people poured in. Among those present were Dean and Mrs. Weidner and a large number of the Engineering Faculty. During the evening, a few dancing contests were held in which almost all participated. Refreshments were served in the Milk Bar.At 12.00, the band played nonstop music until 12:45, when the dance was closed with the playing of Silent Night and the Alma Mater.









trips

photos b. bedrossian







The Engineering Society was able to arrange two trips. Both proved successful, and both were high- lighted by a pleasant partnership of the engineers and B.C.W. students.

The first excursion, to Baalbeck, started early on the morning of November 22, when busloads of singing, high spirited students rumbled through the already busy streets of Beirut. The Engineering Society was off with Professor Kalayan as its encyclopedia of information on all matters concerning the place of the ir destination; the fabulous ruins of Baalbeck.

As they approached the six remaining columns of the Temple of Jupiter rising majestically above the plain, all thought of the modern world was forgotten. Before arriving at the Temple itself,

> they visited the ancient rock quarry and climbed up the slope of the famous «Hajar El-Heblé» to take photos. Beneath the peaks of Makmel they found the remains of the temples of Jupiter, Venus, and Bacchus, built by the Roman emperors in the second and third centuries A.D. They noted the repeated carvings of egg and dart borders, and marvelled at the size of the massive stones that were so carefully cut and perfectly fitted in an age of few mechanical aids.

Beneath the long shadows cast by the pillars of Baalbeck they ate their lunches while the lazy tunes from Jirair

Kevorkian's accordion added to the general contentment. They suddenly became lively again when The Queen of Baalbeck was chosen and crowned above the crowd of students on the steps of the Temple of Bacchus.

Two short stops were made on the way home. At the source of Ras-el-Nebe', they rested on the grassy lawns and at Zahlé, drank cokes and scuffed up the autumn leaves beneath the trees. In spite of the long day, no weariness seemed to dampen their spirits. Songs were as animated upon entering Beirut as they had been



that morning. Passersby now going home were thus reassured that the Engineering society had completed an enjoyable trip. The second trip began on the morning of March 30th — destination — Afqa! Shortly past eight, four busses pulled out of the Medical gate headed for their first stop — the B.C.W. Accompanying the busses were five private cars taking the «overflow» from the group.

Needless to say, most of the students who went on the trip had

no idea where they were going or what they were going to see, except for the name «Afqa». The Engineering Society had done its best, to keep this information secret.

Afqa, also known as «Source d'Adonis», is 1300 meters above sea level. The source is a subterranean river surging out of the mountainside through a huge cavern in a spectacular cataract followed by another fall one hundred meters downstream. It was

in the coolness of the cavern, dug into the clifflike slope by the water itself, that the group spent two hours lunching and relaxing. Almost facing this cavern accross a shallow gorge were the ruins of the Roman temple of Venus and Adonis, as well as a Crusader fort, the histories of which were related by Mr. Kalayan.

On the way back, several stops were made at points of Geologic and Archeologic importance, about which Mr. Baggaley and Mr. Kalayan made some remarks. One of these stops was at Jebeil, or Biblos where the group stayed about an hour, returning to Beirut in the early evening, as enthusiastic and vivacious as when it had left.









sports

Sports came to play a new and important part in the life of the Engineering Society. To maintain a healthy physical, as well as mental, society in the school, the Dean gave the signal late this year. By the end of the second semester the new spirit of sports had come to stay, which makes 1952 a milestone in the records of the society.

Four teams of Football, Basketball, Volleyball, and Baseball were formed with students selected exclusively from the Engineering school. A series of matches with the other teams of the University followed. The results, on the whole, were encouraging. Our football team won the AUB Championship for this year. The other three teams did quite well in many matches,





photos b. bedrossian

lost some and won others. Nevertheless, it is a start which gives us confidence in our future prospects.

year book

Last, but not least, is this book published by the Engineering Society. It is the first Engineering year book issued. True, you may find many gaps to fill, but it is a new project. It briefly surveys the accomplishments of the year. Thanks are given to the Cabinet members, the Editorial Board of the Year Book, and all the people who cooperated.











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OTHER ENGINEERING ACTIVITIES

Engineering students have long and hard daily working hours in the drawing and lecture rooms of Bliss, Fisk, and College Halls; but this elite of our campus community also has quite a number of special privileges and many opportunities for enjoying themselves in their spare time. It is true that they have some of their classes with other schools' students and they share in all the life of this campus by participating in almost all the social activities from the medical gate demonstrations to Chonita's dancing. Still they have some unrivalled private activities which they enjoy. Summer surveying camps, semi-lab trips are good examples. It might be of interest to give a short resumé of some of these activities.

engineering students on the campus.

Slide rules, Tee squares, transits and reinforced concrete bodies typify engineering students on the campus. A new engineering student is always proud of the instruments that he carries around on the campus because they serve to identify his future honorable profession. Sometimes he even wishes that testing machines and Venturi tubes could be made portable so as to eliminate any doubt which might arise in his identification.

Surveying parties are often seen on the campus «fully equiped». When the surroundings are inspiring and the «weather» conditions rather favorable they seem to be taking full advantage of the instruments which stand ready at their command. Other students eye them envyingly and seem to wonder «how interesting can a transit be?»

West Hall's Milk Bar - the Café Rendez-vous of A.U.B. - gives

the students of Architecture

a living example of the use of color and modern surface treatment whenever their aesthetic sense permits them to drop in for refreshments. The new Library on the other hand offers



them consolation, though at present it stands as an «Unifinished Symphony» of Architecture.

Eager young engineers stroll around the site of the new Engineering building anxiously examining the daily progress of its construction (without notebooks to report to Professor Baggaley). They glance back at good old Bliss Hall and wish they could say «Goodbye»; but all that they can ethically say with careful consideration of safety factors is a faint «Au Revoir», campus life, c'est la vie...

summer surveying camps.

Here are two short reports of 1950 and 1951 summer camps which might be of use for future generations as a guide and a good example too.

● 1950 Camp:

(related by one of the campers)

« Apples, Surveying and Snakes »

We were a group of sixteen students, some very tough, others not quite so tough, it seems, for they were camping for the first time in their lives. Our instructor, a teacher of Mathematics in the Prep School and a veteran of the Railway Engineers Corps, was surely the toughest for he shaved only twice during the whole month.

The place assigned for our «Summer Surveying Practice», Baalchemay, is a small village near Bhamdoun. Shortly after our arrival a rumour spread quickly all over the village that a group of engineers from the «Cadastre» were camping on the plot of land near the fountain. We soon began receiving guests many of whom came to inquire about the miserable fate of their property. Naturally, feeling a sense of authority for the first time, we did not tell them at first who we really were. But as time went by their curiosity was satisfied, especially after the «gentlemanly» behaviour of certain people.]

The fieldwork was done in the scorching heat of the day. Some were lucky enough to be working in the thorny shrubbery on the rocky hilltops in the neighbourhood of some hospitable villagers who offered them a cup of coffee or what not. Others were somewhat unfortunate to find a couple of snakes eager to join their group, possibly to help them out in their surveying work, poor little creatures! Their heads were soon chopped off by two «professional snake hunters». Many of us including someone who was constantly obsessed with the idea of snakes and such dangerous creatures, marched in the processional funeral arranged according to the traditional rites and under the direction of the Victorious Killers.



In the afternoons, while we were busy arguing with all sorts of figures and formulae in a desperate trial (at first) to draw up a plan of the district concerned, we were often surprised by the unexpected check-ups of our «Old Boss». Professor Osborn was a charitable person with a pleasing sense of humour and a rather strict sense of discipline. He brought us fruits and biscuits, cracked a lot of funny jokes while drinking a «cup of hot coffee» and administered a shower of stinging words and cold water upon those whom he found sleeping. « The Greenhouse », which was quite a long walk from the camp, was the hotel where we had our meals. It was renowned, it seems, for its «exquisite cuisine», but we were served quite often with the same course (squash to be precise).

As to the dessert, it was not exquisite at all, nor was it very dependable. We had to find a way out, usually at the expense of the poor peasants' fruit trees in the neighbourhood of the camp. Their grapes were still sour and their apples still green, but by comparison they tasted as delicious as could be.



As a reward for our splendid achievement, for according to the faculty it was the best in years, we enjoyed an informal gathering provided by Prof. Manassch who was responsible for the whole camp. With all that happened in Baalchemay our stay there was very pleasant and will always bring to us wherever we may be, the sweet and pleasant memories of the good old days.

• 1951 Camp:

«Summer Surveying Camp, July 1951»

« No drinks, no cards, and no beards, » were the first words of the teacher in charge, Professor Macksoud, to the students of the Engineering II class of 1950-1951, before they left for the summer surveying camp. Papken Janjigian, the instructor saw to it that these principles were not violated at random.

The camp was held in Suk El-Gharb during the whole month of July, 1951. The Suk El-Gharb College For Boys provided boarding and lodging accommodations.

It did not take long for the students, who left with the hope of having an easy time, to realize that they were not out for a vacation. The very first day, soon after lunch, Professor Macksoud took them on a strenuous and exhausting reconnaissance of the dry and rugged terrain which they were to survey during that month.

Papken's shrill police whistle blew every morning at 6:30 interrupting the sweet dreams of the heaviest snorers. After a hasty breakfast work was started and continued till noon. Following the two hours break work was resumed till 5 p. m. when Papken's whistle blew, this time announcing the hour of salvation.

Along with the hard work there was a lot of fun. By majority vote it was decided that a fine of 25 piasters be inflicted on any person, including Papken, who arrived late for meals. A few students almost went bankrupt paying this fine. The money collected from this tax was used to celebrate «Farewell to camp».

The last night, two practical jokers slipped into the then deserted dormitory and hid all the slippers and pajamas of the students. This brought forth confusion, spiced with. H_2 S and peppered candies and lasted till long after midnight when every one realized that it was time to go to sleep, for the next morning he was heading home.

Although the work was tough and hard the students enjoyed themselves immensely both during work and in their free time. I feel sure that the memory of that month in Suk El-Gharb will remain as the most pleasant of our school days.

technical trips

With the wholehearted cooperation of Professor Abdul Malek, an expert informant in Highway Engineering and Sanitation, and Professor Yeramian, a zealous and active teacher of Architecture, the Third Year Engineering students were able to go (up to March 30, 1952) on several technical trips in Beirut and its suburbs and study underlying engineering problems:

Heavy construction in the main building and in the concrete runways of the Khaldeh Airport.

The process of the production of Idealit at the Municipality plant.

The manufacturing of centrifugal (plain and reinforced) concrete pipes and knappen blocks (at Araman's factory). The manufacturing of different kinds of bricks at Vartabedian's factory.



Roads under construction, on the campus.

The disposal of the sewage of the upper region of Ras Beirut into the sea at Jnah.

The purification of water by filtration and chlorination at Beirut water supply plant at Dbai.

The processes in the reduction of refuse into fertilizers at the garbage disposal plant at the Quarantine.

The architectural and structural features in nearby buildings.

Other classes had similar opportunities for technical trips. Engineering 11 students were able, through their «Thermodynamics» course under our beloved scholar Professor Rubinsky, to survey the following:

Beirut port refrigeration centre.

Electric Company of Beirut.

Combustion and steam engines in the University wells and main laundry.

The fourth year class had lab trips with Professor Macksoud to the Saida and Litani river irrigation canals. Other groups in Agriculture courses had similar trips with Professor Macksoud and Professor Riley, and others too numerous to mention.



photos b. bedrossian





THE DIVISION OF ENGINEERING

Visualize as a pyramid that part of the body politic which must provide the creating, producing and operating force of any industrialized society.

Consider this pyramid to be stratified in levels parallel to the base. Consider each stratum as representing a level of the industrial economic order. Bear in mind that engineering is one of the few professions which is in every sense of, by and for the total population, and that therefore it cannot function properly without adequate personnel in all of the levels of this industrial society.

Then consider these levels as general categories of personnel listed from base to apex as follows:

First is the unskilled labor reservoir of the population.

Second are those semi-skilled in some useful activity.

Third are those who are sufficiently trained and skilled to maintain an established acceptable standard of quality and efficiency in individual and collective vocational work.

Fourth are those who are sufficiently trained, skilled and experienced to lead, direct and perform reliable supervision over the first three strata.

Fifth are those who are adequately trained, skilled and educated to meet an established standard of quality and efficiency in performing technical work.

Sixth are those who are adequately trained, skilled and educated to do acceptable technical research on an individual basis.

Seventh are those adequately trained, skilled and educated to perform engineering work with an acceptable degree of originality, quality and efficiency.

Eighth, the apex, are those who are adequately trained, skilled, educated and sufficiently experienced to conceive, perform, direct and control industrial and engineering works including the necessary training and educational systems for the development of all lower levels.

The educational system required to produce all this personnel can be likened to an inclined elevator shaft running up the slope of the pyramid providing a device for filling in the successive levels from base to apex as individual ability and effort warrants. Without such a device for individual and collective self improvement, an economic caste system develops and the embryo of a progressive stable industrial society is stifled before it can develop.

Since the practice of engineering is the art of using human knowledge and judgement in the control and use of the forces of nature for the benefit of humanity, it must be conceived and developed in each geographical area to fit the needs and conditions existing there. Consequently while basic technology and technical «know-how» is an importable item, the system of its application and use in areas foreign to its place of origin is not. This is because the conditions which produce a satisfactory system in one area almost never exist in workable combination in any other. Any attempt to develop engineerring education and practice in the Middle East by transplanting American, British, French or any other foreign system as such would be predestined to dislocate rather than assist the development of the area.

Therefore the engineering educational effort at The American University of Beirut is dedicated to the creation and development of a system of Engineering training, education and practice which will meet the requirements of the Middle East.

There is an urgent need in the Middle East for broadly trained engineers. There is not sufficient need or opportunity to justify the kind of specialization in engineering education that exists in either Europe or America. Hence the curriculum offered by the new School of Engineering is being developed to produce graduates at the Bachelor level with the broadest possible training in the basic and related subjects common to all divisions of the engineering profession. Courses will be offered leading to Bachelor Degrees in Civil Engineering, Mechanical Engineering, Electrical Engineering and Architectural Engineering.

At present Middle East students have little experience in a technical industrial society. They have had little opportunity to absorb by association, environment or early instruction informal knowledge concerning technical, mechanical or industrial things.

While such informally acquired knowledge is usually taken for granted by American and European institutions, the great lack of it in students from the Middle East creates a serious problem. In order to compensate for this deficiency it is necessary to make special provision through experience in the shops and laboratories for this part of the students' growth. For this reason the Division of Engineering at the American University of Beirut is organized like an operating Engineering Company. The drafting rooms have been arranged to provide work stations for each student. In these rooms all students have been organized into groups with the final year men responsible for the group over which they have been given supervision. Students will be kept in an atmosphere of doing useful work of an acceptable quality on a required time schedule. The Faculty will function jointly as professors and senior members of the engineering firm. As much as possible of the instruction will be carried on in laboratories, shops and drafting rooms. Only those basic courses which are not adaptable to this approach will be taught in classrooms. A complete social program is being integrated with the academic work in order to offset any tendency toward the development of unsocial characteristics in the students. And special attention is being given to the liberal and cultural development of the students through supplementary programs.

There is at present only a limited number of trades personnel sufficiently trained, skilled or indoctrinated to bring into physical being the designs, plans and concepts of professional engineers and architects with an acceptable degree of efficiency or quality.

It is impossible to develop a sound agricultural industrial economy without adequate engineering works. And, it is futile to produce capable professional engineers for service in their home areas unless they are provided with the necessary vocational and technical personnel to execute their plans in an acceptable manner. In order to help remove this deficiency as rapidly as possible and to increase the vocational-technical base of our engineering students, a vocational school and vocational teacher training program is being developed as an integral part of the Division of Engineering.

All Engineering students will be required to complete a basic course in all the shops before graduation.

We will also provide the kind of engineering laboratory and investigation services normally furnished by Engineering and Technical Schools.

By doing this we will: 1) make more efficient use of our equipment and Faculty; 2) be able to assist in the industrial development of the whole area by establishing and maintaining appropriate standards; 3) be able to broaden our educational effort beyond the student level through extension and adult education; and 4) be able to cooperate better with other development efforts in this area.

Since the only proved major natural resource of the Middle East, excluding the Persian Gulf Basin, is agriculture, it is obvious that any industrial development must depend on agriculture and can develop only as fast as the agriculture base is improved. For this reason agricultural training and education is considered an essential part of the solution to the total problem.

The School of Agriculture is being developed separately from the Engineering sequence. But the two efforts are being integrated in operation and purpose.

Finally it seems appropriate to repeat that the program of The Division of Engineering is dedicated to the development of capable professional engineers from students of the Middle East for service in and to the Middle East. For this reason the program will remain dynamic and will adjust to meet the ever changing needs of the area.

How well we fulfill our mission will be measured by the contribution our graduates make to the development of their communities. To them we entrust the future not only of their Alma Mater but also of their society with an abiding faith that both will constantly progress.

C. Ken Weidner, dean



S. D. Bechtel, chairman of International Bechtel, Inc., and of the allied engineering and service organization.

More than any other one person, Mr. BECHTEL made the engineering building possible.



PLAN OF FOURTH FLOOR

plans of the ENGINEERING AND PHYSICS BUILDING









plans of the ENGINEERING VOCATIONAL LABORATORIES









the SCHOOL OF AGRICULTURE



the AGRICULTURE HALL plot plan of first stage



the AGRICULTURE HALL plot plan with future expansion

Through a grant of half a million American dollars from the Ford Foundation, a new school of Agriculture will be inaugurated in October ,1952. The grant will provide for the construction of a central agricultural building and headquarters on the University Campus in Beirut, and at the same time for the purchase of an experimental farm area on which a portion of the agricultural course and most experimental work would be carried on. Plans are well advanced for the construction of the necessary buildings on the campus. It is hoped that by the time this Year Book is distributed work on the foundation would have already commenced.

«Agriculture Hall » as the main building will be called, will be located west of the training field, and will be composed of two units. One, the classroom-Administration unit, will include: six modern classrooms, ten offices, conference room, lecture hall, student reading room and lounge. The other, the laboratory unit, will include four large laboratories for plant science, animal science, soils and irrigation and food technology; two special laboratories, one for dairy products the other for studies on storage and handling of fruits and vegetables; ten project laboratories for student and staff research work; a control growth room, where conditions of temperature, light, humidity, etc... may be controlled and their effect on plant and animal life observed and studied. An animal barn and a green house will also be attached to it.

The University Farm, with an area of about 1.000 dunums (100 Hectares or 250 Acres) will be centrally located. Developments on it will include: a Classroom — Laboratory building, a Dormitory — Refectory, several barns for dairy cattle, sheep, horses, goats, poultry and rabbits, a modern storage plant with grain graders and fumigation chambers, machinery sheds and workshops. With all this construction in view, one would naturally ask. What type of programs are to be offered and why not have all the buildings in one place?

Two types of programs will be offered. The first will be a four year period of study, leading to the degree of Bachelor of Science in Agriculture. This is intended for students planning to go into modern agricultural production, agricultural research, Government or private agricultural positions. It includes at least two semesters spent on the farm. The program of study is comparable to that of American Colleges but modified to meet the demands of the area. Entrance requirements for First Year Agriculture are completion of the Freshman Science program at American University of Beirut or its equivalent and selection by the Agriculture Faculty.

The second will be a two year non-degree offering in practical agriculture. This is intended for sons of average or small land owners, who would not normally afford a college education. Here in a period of two years the basic principles of modern agriculture are presented to them coupled with practical training in a manner insuring their ability to execute themselves most of the work required on their lands. The stress is on practical training, and admission requirements are completion of High School, and under special conditions this may be waived.

Since the technical training in agriculture itself must necessarily be supported by additional course work in economics, sociology, engineering and the basic sciences of chemistry, biology, botany and mathematics, it was felt essential to have the course offerings in Beirut where there could be close collaboration with other branches of the School of Arts and Sciences. This would obviate the necessity of duplicating facilities if the school were established entirely on the farm. At the same time great emphasis is placed upon the necessity of offering a considerable portion of the agricultural training on an experimental farm area where a student could be required to develop close contact and personal experience with the practical aspects of farm works. One of the greatest disad-



plans of AGRICULTURE HALL (first stage)

vantages of previous agricultural programs offered in the Middle East, has been their concentration on theoretical training with an almost complete absence of pratical experience. It was felt that this deficiency must be remedied if the work of the School of Agriculture were to be of real benefit to the area it is expected to serve.

To encourage scholarship and as well help worthy students who cannot meet the financial demands of a College Education, the School of Agriculture will be granting a generous number of Scholarships yearly, to cover all the tuition fee and in special cases, part of the boarding expenses also.

There is little necessity to emphasize the need of the Middle East for such an agricultural program or to show the individual or personal benefit that could be derived from following any one of the programs of study. With the possible exception of the Persian Gulf area the development of the entire Middle East must rest upon a well established agricultural base. Even industrial development will require the expansion of agriculture as the primary source of raw material. A very large proportion of the population is engaged in agriculture, and an improvement in this field will therefore most immediately affect this majority and will make its influence felt most certainly in the standard of living and way of life of the entire region.

Salim Macksoud Acting Director, School of Agriculture Historical Sketch of The development of Engineering Courses at the A.U.B.

It was realized long ago that the countries of the Near East would require more and more specialists trained particularly in agricultural and civil engineering. The A.U.B. decided to provide such training and in 1913-14 the Agriculture-Engineering course was started. It was designed to prepare men as engineers in the various agricultural development schemes in which knowledge of both engineering and the principles of agriculture is essential. The course was planned so that a graduate could later specialize in either agriculture or engineering.

The course, as planned, covered three years. It consisted of two years parallel to the Junior and Senior years of the regular college course and lead to a Bachelor of Arts degree. Upon completion of a third year, the student received the degree of Bachelor of Science, together with a testimonial indicating the nature of the studies pursued during the course. In addition to the ordinarily required subjects of the Sophomore year, Freshman Math and drawing, Elementary Analysis and Analytic and Descriptive Geometry were required for admission.

Between the first and second, and second and third years, a 6-week summer shop course and a 6-week advanced surveying course were required. The first two years included the basic courses in Physics, Chemistry, and Mathematics to which were added Topographical Drawing, Plotting, Mechanical Drawing, Applied Mechanics (Strength of Materials), Mechanism, Thermodynamics, and other agricultural courses. The third year included — Rural Engineering Design, Hydraulics, Sanitary Engineering, Materials of Construction, Testing of Materials, Highway Engineering, Theory of Structures, Reinforced Concrete, Foundations and also electives in Agriculture. This curriculum included the essential elements of a Civil Engineering Course designed to meet the needs of the area.

The first graduation took place in 1916, when four students received the degree of Bachelor of Science. Professor James Patch (Professor of Chemistry) was the first head of the Department. During World War I the engineering course was discontinued, and was reestablished in 1918-1919. The same curriculum and the same conditions for graduation were maintained and continued in effect until 1920-21. This year Professor George A. Bisbee, on leave from Carnegie Institute of Technology, was Acting Head of the Department. Four students received the degree of B.S. in Agricultural Engineering in 1921. In 1921 the third year was dropped, and Professor Jurdak, the Head of the Mathematics Department, became the Head of this Department also. In the 1921-22 catalogue the following statement was made:

«The courses, which are open to candidates for the degree of B.A. will enable students, who intend to become engineers, to enter the third year class in schools of Engineering in Europe or America».

In the catalogue of 1922-23, this prophetic statement was made:

«Courses in Agricultural Engineering were begun in 1914. It is expected that eventually these courses will develop into Schools of Agriculture and Engineering».

From 1921 until 1945 there were no radical changes but some new courses were introduced, teaching personnel increased, and laboratory work organized, the latter mostly improvised and locally made. Nevertheless, this was a considerable improvement over the first period. In the year 1923-24 eleven courses were offered. In 1943-44 the number of engineering courses had increased to thirty. These included Hydraulic and Testing Materials Laboratories and Surveying Summer Practice which gave a more practical aspect to all training.

1944-51 was a new period. The third year was again added with more advanced courses in Structures, Architecture, Sanitary Engineering, Town Planning and Irrigation. Courses in Engineering Design were introduced and completion and proper presentation of a special project (thesis) was required as a condition of graduation. Those who completed these requirements were granted the degree of B.S. in Civil Engineering.

Engineering education at A.U.B. has contributed considerably to the progress and to the development of Near Eastern countries. Many students who were graduated or who took some engineering courses became leaders in the Near East. Among them were prominent engineers, well known contractors, ambassodors, representatives to the United Nations and members of Parliament. Some of the graduates occupy important technical positions in the United States. A.U.B. graduates have done well in Engineering schools of the U.S.A. and Europe.

During this development the teaching personnel had continuous professional contact with the industrial and engineering development in neighboring countries. Some teachers were practising engineers, some served as consulting engineers and occasionally some carried on research, and their articles in the fields of engineering science were published.

1951-52 brings a new era — a new school of Engineering with its own Dean and its own faculty — and 1952-53 will see it in its own building with increased facilities.

CANONS OF ETHICS FOR ENGINEERS

foreword

Honesty, justice, and courtesy form a moral philosophy which, associated with mutual interest among men, constitute the foundation of ethics. The engineer should recognize such a standard, not in passive observance, but as a set of dynamic principles guiding his conduct and way of life. It is his duty to practice his profession according to these Canons of Ethics.

As the keystone of professional conduct is integrity, the engineer will discharge his duties with fidelity to the public, his employers, and clients, and with fairness and impartiality to all. It is his duty to interest himself in public welfare, and to be ready to apply this special knowledge for the benefit of mankind. He should uphold the honor and dignity of his profession and also avoid association with any enterprise of questionable character. In his dealings with fellow engineers he should be fair and tolerant.

professional life

Sec. 1. The engineer will co-operate in extending the effectiveness of the engineering profession by interchanging information and experience with other engineers and students and by contributing to the work of engineering societies, schools, and the scientific and engineering press.

Sec. 2. He will not advertise his work or merit in a self-laudatory manner, and he will avoid all conduct or practice likely to discredit or do injury to the dignity and honor of his profession.

relations with the public

Sec. 3. The engineer will endeavor to extend public knowledge of engineering, and will discourage the spreading of untrue, unfair, and exaggerated statements regarding engineering.

Sec. 4. He will have due regard for the safety of life and health of the public and employees who may be affected by the work for which he is responsible.

Sec. 5. He will express an opinion only when it is founded on adequate knowledge and honest conviction while he is serving as a witness before a court, commission, or other tribunal.

Sec. 6. He will not issue ex parte statements, criticisms, or arguments on matters connected with public policy which are inspired or paid for by private interests, unless he indicates on whose behalf he is making the statement.

Sec. 7. He will refrain from expressing publicly an opinion on an engineering subject unless he is informed as to the facts relating thereto.

relations with clients and employers

Sec. 8. The engineer will act in professional matters for each client or employer as a faithful agent or trustee.

Sec. 9. He will act with fairness and justice between his client or employer and the contractor when dealing with contracts.

Sec. 10. He will make his status clear to his client or employer before undertaking an engagement if he may be called upon to decide on the use of inventions, apparatus, or any other thing in which he may have a financial interest.

Sec. 11. He will guard against conditions that are dangerous or threatening to life, limb, or property on work for which he is responsible, or if he is not responsible, will promptly call such conditions to the attention of those who are responsible.

Sec. 12. He will present clearly the consequences to be expected from deviations proposed if his engineering judgment is overruled by nontechnical authority in cases where he is responsible for the technical adequacy of engineering work.

Sec. 13. He will engage, or advise his client or employer to engage, and he will co-operate with, other experts and specialists whenever the client's or employer's interests are best served by such service.

Sec. 14. He will disclose no information concerning the business affairs or technical processes of clients or employers without their consent.

Sec. 15. He will not accept compensation, financial or otherwise, from more than one interested party for the same service, or for services pertaining to the same work, without the consent of all interested parties.

Sec. 16. He will not accept commissions or allowances, directly or indirectly, from contractors or other parties dealing with his client or employer in connection with work for which he is responsible.

Sec. 17. He will not be financially interested in the bids as or of a contractor on competitive work for which he is employed as an engineer unless he has the consent of his client or employer.

Sec. 18. He will promptly disclose to his client or employer any interest in a business which may compete with or affect the business of his client or employer. He will not allow an interest in any business to affect his decision regarding engineering work for which he is employed, or which he may be called upon to perform.

relations with engineers

Sec. 19. The engineer will endeavor to protect the engineering profession collectively and individually from misrepresentation and misunderstanding.

Sec. 20. He will take care that credit for engineering work is given to those to whom credit is properly due.

Sec. 21. He will uphold the principle of appropriate and adequate compensation for those engaged in engineering work, including those in subordinate capacities, as being in the public interest and maintaining the standards of the profession.

Sec. 22. He will endeavor to provide opportunity for the professional development and advancement of engineers in his employ.

Sec. 23. He will not directly or indirectly injure the professional reputation, prospects, or practice of another engineer. However, if he considers that an engineer is guilty of unethical, illegal, or unfair practice, he will present the information to the proper authority for action.

Sec. 24. He will exercise due restraint in criticizing another engineer's work in public, recognizing the fact that the engineering societies and the engineering press provide the proper forum for technical discussions and criticism.

Sec. 25. He will not try to supplant another engineer in a particular employment after becoming aware that definite steps have been taken toward the other's employment.

Sec. 26. He will not compete with another engineer on the basis of charges for work by underbidding, through reducing his normal fees after having been informed of the charges named by the other.

Sec. 27. He will not use the advantages of a salaried position to compete unfairly with another engineer.

Sec. 28. He will not become associated in responsibility for work with engineers who do not conform to ethical practices.

(Adopted by the Engineers' Council for Professional Development, October 25, 1947).

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