



# **American University of Beirut**

## **Catalogue 2006–07**

# Notice

Information in this catalogue applies to academic year 2006–07 as of September 1, 2006. The University reserves the right to make changes without prior notice in programs, course offerings, academic requirements, and teaching staff as the need arises.

## Student Responsibility for Catalogue Information

Students are responsible for reading the information in this catalogue. Failure to read and comply with faculty and university regulations will not exempt students from whatever penalties they may incur.

All students are assigned post office boxes and e-mail addresses. **Students are responsible for checking their post office boxes and e-mail regularly for official announcements and information.**

### Beirut address

American University of Beirut  
PO Box 11-0236  
Riad El-Solh 1107 2020  
Beirut, Lebanon

Telephone: (961) 1-374374/374444/350000/340460  
Fax: (961) 1-351706

### New York address

American University of Beirut  
3 Dag Hammarskjöld Plaza, 8th Floor  
New York, NY 10017-2303  
USA

Main Telephone: (001) 212-583-7600  
Fax: (001) 212-583-7650 (Executive Office)  
(001) 212-583-7651 (Development Office)

This catalogue can also be viewed at <http://www.aub.edu.lb>

Additional information about course requirements can be viewed on the on-line Banner Catalogue available at the AUB webpage.

**The American University of Beirut is an affirmative action institution and an equal opportunity employer.**

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# Academic Calendar 2006–07

## Fall Term 06–07

September 27	first semester begins for all faculties except Medicine
September 27–October 5	payment of fees for the first semester for all students
September 28–October 3	change of schedule for the first semester (Add/Drop)
October 2	opening ceremony
October 6–19	late payment for the first semester for all students
October 19	deadline for submitting NSSF declaration for academic year 06–07
October 24–25	Id al-Fitr holiday—no classes
November 22	Independence Day holiday—no classes
November 28–December 1	second semester advising for current students
December 4	Founder’s Day—classes will be held
December 5–January 12	inter-faculty on-line transfer applications for the second semester 06–07
December 8	last day for withdrawal from courses for the first semester
December 12–15	second semester on-line course registration for current students
December 22	10:00 pm—Christmas and New Year vacation begins

<b>2007</b>	
December 31– January 1	al-Adha holiday—no classes
January 2	10:00 pm—Christmas and New Year vacation ends
January 6	Armenian Christmas
January 8	deadline for submitting applications for deferral of payment for the second semester for all currently registered students—application available on the website
January 12	10:00 pm—classes end for all faculties except Medicine
January 12–26	payment of fees for current students for the second semester
January 15–17	reading period for the first semester
January 18	first semester examinations begin
January 20	Hijra New Year holiday—no classes
January 24–25	second semester pre-registration for new, old returning, and cross-registering students
January 25–26	New Student Orientation Program—Office of Student Affairs
January 27–February 17	late payment for the second semester for all currently registered students
January 29–February 1	second semester advising and on-line course registration for new, old returning, and cross-registering students
January 30	Ashoura holiday—no classes
January 31	first semester ends for all faculties except Medicine

**Spring Term 06–07**

February 5	deadline for submitting applications for deferral of payment for the second semester for new and old returning students—application available on the website
February 5	second semester begins for all faculties except Medicine
February 6–12	change of schedule for the second semester (Add/Drop)
February 8–12	payment of fees for new students
February 9	St. Maroun's Day holiday—no classes
February 13–17	late payment for the second semester for new and old returning students
February 27	deadline for submitting NSSF declaration for the second semester
March 31	Prophet's Birthday holiday—no classes
April 2	10:00 pm—Easter vacation begins
April 9	10:00 pm—Easter vacation ends
April 10–13	advising for current students for the fall term 07–08
April 17	last day for withdrawal from courses for the second semester
April 17–May 11	inter-faculty on-line transfer applications for summer term 06–07
May 1	Labor Day holiday—no classes
May 15–18	advising and on-line registration for current students for summer 2007
May 16–June 19	inter-faculty on-line transfer applications for the first semester 07–08
May 21–25	fall term (07–08) early (Phase I) on-line course registration for current students in all faculties except Medicine
May 23	classes end for Med II
May 25	10:00 pm—classes end for all faculties except Medicine
May 26–28	reading period for the second semester
May 29	second semester examinations begin
June 5–8	pre-registration, advising, and on-line course registration for new, old returning, and cross-registering students for summer 2007
June 11	second semester ends for all faculties except Medicine
June 12–16	payment of fees for summer 2007

**Summer 2007**

June 18–22	late payment for summer 2007
June 20	classes end for Med III and IV
June 23	commencement exercises
June 25	classes begin for all faculties except Medicine
June 26–29	change of schedule for summer term (Add/Drop)
July 6	classes end for Med I
July 9–13	fall term (07–08) advising and early (Phase II) on-line course registration for current students in all faculties except Medicine
July 30	last day for withdrawal from courses for the summer term
August 11	10:00 pm—classes end for all faculties except Medicine, and Agricultural and Food Sciences
August 13–20	final examinations for all faculties except Medicine, and Agricultural and Food Sciences
August 15	Assumption Day holiday
August 20	10:00 pm—classes end for the Faculty of Agricultural and Food Sciences
August 21–25	final examinations for the Faculty of Agricultural and Food Sciences

Id al-Fitr, al-Adha, the Hijra New Year, Ashoura, and the Prophet's Birthday are determined after sighting the moon and because of that the actual dates may not coincide with the dates on this calendar. The holidays will be the first two days of the feast as declared for Id al-Fitr, the first two teaching days for al-Adha, and the first teaching day for Hijra New Year, Ashoura, and the Prophet's Birthday.

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# The University

The American University of Beirut (AUB) is a private, independent, non-sectarian institution of higher learning, founded in 1866. It functions under a charter from the State of New York and is governed by a private, autonomous Board of Trustees.

The University has six faculties: Arts and Sciences, Medicine (including the School of Nursing), Engineering and Architecture, Agricultural and Food Sciences, Health Sciences, and the Olayan School of Business. At present AUB offers programs leading to both bachelor and master degrees.

The University is co-educational. The language of instruction is English.

## Statement of Accreditation Status (SAS)

Degrees awarded by the American University of Beirut are officially registered with the Ministry of Higher Education in Lebanon and with the Board of Education in the State of New York. AUB was granted institutional accreditation in June 2004 by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, 215-662-5606.

The University is also a member of the Association of American Colleges and Universities (AACU), the Association of American International Colleges and Universities (AAICU), the American Association of Collegiate Registrars and Admissions Officers (AACRAO), the Arab Association of Collegiate Registrars and Admissions Officers (Arab ACRAO), the College Board, the Council on International Educational Exchange (CIEE), the National Association for Foreign Student Advisers (NAFSA), the National Association of Student Personnel Administrators (NASPA), the National Association for College Admission Counseling (NACAC), the Overseas Association for College Admission Counseling (OACAC), and the European Council of International Schools (ECIS).

## Mission Statement

The American University of Beirut (AUB) is an institution of higher learning founded to provide excellence in education, to participate in the advancement of knowledge through research, and to serve the peoples of the Middle East and beyond. Chartered in New York State in 1863, the University bases its educational philosophy, standards, and practices on the American liberal arts model of higher education. The University believes deeply in and encourages freedom of thought and expression and seeks to foster tolerance and respect for diversity and dialogue. Graduates will be individuals committed to creative and critical thinking, life-long learning, personal integrity and civic responsibility, and leadership.

# History

In 1862 American missionaries in Lebanon and Syria, under the American Board of Commissioners for Foreign Missions, asked Dr. Daniel Bliss to withdraw from the evangelical work of the mission in Lebanon to found a college of higher learning that would include medical training. It was felt that this college should have an American educational character, should be administered independently from the mission, and should be maintained by its own funds. Dr. Bliss traveled to the United States in the summer of 1862 to solicit funds for this new enterprise. By August 1864 he had raised \$100,000 but, because of inflation during the Civil War, it was decided that he should raise a sterling fund in England to start the operations of the college, leaving the dollar fund to appreciate. After collecting £4,000 in England, Dr. Bliss traveled to Beirut in March 1866.

On April 24, 1863, while Dr. Bliss was raising money for the new school, the State of New York granted a charter under the name of the Syrian Protestant College. The college opened with its first class of 16 students on December 3, 1866.

The cornerstone of College Hall, the first building on the present campus in Ras Beirut, was laid December 7, 1871, by the Honorable William E. Dodge, Sr., then Treasurer of the Board of Trustees. At this ceremony President Daniel Bliss expressed the guiding principle of the college in these words:

This college is for all conditions and classes of men without regard to color, nationality, race or religion. A man, white, black, or yellow, Christian, Jew, Mohammedan or heathen, may enter and enjoy all the advantages of this institution for three, four or eight years; and go out believing in one God, in many gods, or in no God. But it will be impossible for anyone to continue with us long without knowing what we believe to be the truth and our reasons for that belief.

College Hall and the first medical building were completed and put to use in 1873, and the bell in the tower of College Hall pealed for the first time in March 1874. However, College Hall was extensively damaged by a savage explosion in the early morning of November 8, 1991, and the building had to be demolished. It was later rebuilt, and the new College Hall was inaugurated in June 1999.

Since the earliest years, the University has continually expanded and developed new faculties and programs. In 1867 the University started the School of Medicine. Four years later, in 1871, both a school of pharmacy and a preparatory school were added. The latter became independent in 1960 and is currently known as International College. In 1900 the University established a school of commerce which was later incorporated into the Faculty of Arts and Sciences. When the hospital (currently the American University Hospital) opened in 1905, a school of nursing was also established. In 1910 the University opened a school of dentistry, which operated for thirty years. In the early years of the 1950s several program expansions took place. The Faculty of Engineering and Architecture was established in 1951; the Faculty of Agriculture—now the Faculty of Agricultural and Food Sciences—opened its doors in 1952; and, finally, the School of Public Health—now the Faculty of Health Sciences—was started in 1954.

On November 18, 1920, the Board of Regents of the State University of New York changed the name of the institution from the Syrian Protestant College to the American University of Beirut; other charter amendments expanded the functions of the University. All presidents of the University have been in residence at Marquand House, which was completed in 1879.

President	Dr. Daniel Bliss	1866–02
President	Dr. Howard S. Bliss	1902–20
Acting President	Dean Edward F. Nickoley	1920–23
President	Dr. Bayard Dodge	1923–48
President	Dr. Stephen B.L. Penrose, Jr.	1948–54
Acting President	Dr. Costantine K. Zurayk	1954–57
President	Dr. J. Paul Leonard	1957–61
President	Mr. Norman Burns	1961–65
President	Dr. Samuel B. Kirkwood	1965–76
Interim President	Dr. James Cowan	1976–77
President	Dr. Harold E. Hoelscher	1977–81
Acting President	Mr. David S. Dodge	1981–82
President	Dr. Malcolm H. Kerr	1982–84
Acting President	Dr. Samir K. Thabet	1984
President	Dr. Calvin Plimpton	1984–87
President	Dr. Frederic P. Herter	1987–93
President	Dr. Robert M. Haddad	1993–96
President	Mr. David S. Dodge	1996–97
President	Dr. John Waterbury	1998–

The second and fourth presidents, Dr. Howard Bliss and Dr. Stephen Penrose, died while in office. Dr. Malcolm Kerr, the ninth president, was assassinated outside his College Hall office on January 18, 1984.

At the end of July 2005, the number of degrees and diplomas awarded since June 1870 totaled 71,034.

## Location and Climate

The University is situated in Beirut, Lebanon, the crossroads of the Middle East. The campus on the Ras Beirut peninsula runs along the Mediterranean shore and overlooks St. George's Bay toward northern Lebanon and the snow-capped mountains to the east. The campus of just over 28 hectares (70 acres) has over 50 buildings, including the academic buildings, two halls for student activities, two men's and five women's dormitories, faculty apartments, and the Medical Center.

Lebanon enjoys a Mediterranean climate and, for eight months of the year, light clothes may be worn. The winter rainy season from November to March, however, is at times damp and cold. Although most Beirut buildings are centrally heated, warm clothing is recommended for the winter months. The average annual rainfall of 86 cm (34 inches) comes chiefly in the winter when the temperature may drop below 7°C (50°F). Except for this rainy season, the weather in Beirut is delightful. The campus abounds in luxuriant flowers and trees, making it one of the most beautiful campuses in the world.

# Academic Services

## Academic Computing Center

The mission of the Academic Computing Center (ACC) is to promote the use of technology in teaching and learning at AUB, and to provide training and assistance to faculty members in integrating technology into their teaching. To this end ACC provides resources, training, workshops, one-to-one or group consultations, access to software and hardware, and troubleshooting support to all AUB faculty members. ACC's activities and resources reflect AUB's commitment to a state-of-the-art education for all its students. An education that prepares them to be lifelong learners and successful professionals in the contemporary information age.

## Computing and Networking Services

The Computing and Networking Services (CNS) department is the central institutional information and communication technology support unit at the American University of Beirut.

At CNS, we constantly strive to be at the leading edge of technology. We deploy and maintain infrastructure services aimed at enhancing users' productivity by deploying seamless access to services and resources, focusing on functionality, flexibility, manageability, standardization, security, and data safety.

### **Networking and Communication (AUBnet)**

AUBnet provides a state-of-the-art wired and wireless network infrastructure ensuring high-speed, secure, reliable, and widespread access for AUB users across the entire campus and hospital, including all dorms and faculty apartments. AUB students can connect to AUBnet using the networked public PCs available in computer labs, or use their personal laptops or PDAs (Personal Digital Assistant) to connect to the campus-wide wireless network, AUBwlan.

### **Internet Services**

With an AUBnet account, all students, faculty, and staff have full access to the internet, e-mail, and personal websites that are subject to quotas in order to guarantee an optimum level of access to the community. We offer, however, quota free access after business hours and during holidays. We also maintain the AUB official website and web server, plus the Digital Documentation Center's website.

### **Computing Services**

AUBnet users also have access to more than 100 on-line e-learning courses, mostly computer-related but also office management courses, accessible via any web browser. We also offer access to application servers hosting applications such as Microsoft Office, special statistical and graphical software, programming languages, and more. CNS provides regular and on-demand hardware and software consulting to the university and medical center.

### **Computer Labs**

In addition to providing internet access, computer labs also offer a variety of other resources to students, such as printers, USB ports, CD burners, and secure network storage accessible from any public lab where they can store their data.

### **University Core Applications**

Most of AUB's academic and administrative functions are carried out through networked and web-based applications. CNS manages the hardware and software of all university core applications such as the Student Information System (AUBsis) operated by the registrar's office, the Library Information System operated by the University Libraries and the Financial Information System (AUBfis) operated by the comptroller's office. CNS also handles the Storage Area Network (SAN) that provides the university's enterprise storage and back-up system. The smooth and efficient functioning of those systems is ensured by a team of experienced system and database administrators who strive to always deliver the best business value to students, faculty, and staff.

### **Medical Center Information Systems**

The Medical Center Information Systems entity works in conjunction with the clinical departments, hospital administration, and nursing services to cater to the overall IT needs of the hospital and the medical school. The medical center is presently going through a fast-paced computerization process focused on improving the provision of medical care and streamlining operations in accordance with the JCI accreditation standards. Information technology plays an essential role toward achieving this goal.

A web portal and web services bridge together the various medical, clinical, and financial applications running on disparate platforms to form an integrated Hospital Information System. This architecture allows us to transition gradually to new technologies without the need to compromise or re-develop solutions for well-functioning legacy systems, while at the same time affording us the ability and flexibility needed to develop the system in the highly dynamic fields of medical science and information technology.

### **Help Desk**

Friendly and knowledgeable CNS help desk specialists are always ready to support students, faculty, and staff. For computing support contact the CNS help desk at

<http://support.aub.edu.lb> or e-mail [cns.helpdesk@aub.edu.lb](mailto:cns.helpdesk@aub.edu.lb) or dial ext. 2260.

For more information on CNS and computing at AUB, visit our website:

**<http://www.aub.edu.lb/cns/>**

## **Medical Center**

The American University of Beirut Medical Center (AUBMC) is a private, not-for-profit, inpatient and outpatient teaching facility of the Faculty of Medicine. It is a state-of-the-art tertiary medical center that operates 334 beds out of a capacity of 420, serving 20,772 in-patients per year, and an out-patient facility receiving 207,699 out-patient visits (128,304 private; 38,283 general outpatient department (opd); and 41,112 emergency) per year. It provides a wide spectrum of medical, nursing, and paramedical training programs at the undergraduate and post-graduate levels in different specialties and subspecialties with 85 interns, 160 residents, and 33 fellows. It is served predominantly by 250 US-trained highly-credentialed physicians. AUBMC is considered the primary and tertiary referral medical center in Lebanon and neighboring countries. It is fully equipped and hosts a number of centers of excellence. Medical standards of practice at AUBMC compare with similar institutions in the US in adhering to guidelines of the Joint Commission International for Accreditation (JCIA).

## Museums

Founded in 1868, the University Archaeological Museum is the third-oldest museum in the Near East. It was established with a donation from General Cesnola, the American Consul in Cyprus, and the collection has since grown steadily. Today the museum exhibits a wide range of artifacts (15,000 objects; 10,000 coins) from Lebanon and neighboring countries. It traces man's progress in the Near East from the Early Stone Age to the Islamic period. The collections displayed provide educational benefits to students and scholars in Near Eastern archaeology. Several types of educational activities (e.g., lectures, exhibitions, children's programs, trips) are organized in collaboration with the Society of the Friends of the Museum, which also runs the Museum Shop. These activities are open free of charge to the public.

The Department of Geology, which occupies the upper floor of Post Hall, houses the geological museum. It is the only geological museum in Lebanon and could thus be considered of national status. This museum contains over ten thousand specimens within several collections, including the mineral and rock collections, the paleontology collections, and a world class fossil-fish collection. A small part of these scientific collections is used for teaching and research by geology students and visiting scholars.

The Department of Biology provides housing, maintenance, and care for the biological collections of the Natural History Museum. These consist of rich collections of various animals native to Lebanon and the Middle East, including amphibians, reptiles, fish, mammals, the Van Dyck bird collection (which dates back to the late 19th century), and various marine and terrestrial invertebrates. The extensive insect collection includes the Peyron beetle collection and the recently acquired insect collection of the late Professor Emeritus Abdul Mun'im Talhouk. Also under the care of the Department of Biology is the Post Herbarium, which is listed in the directory of world herbaria. The collection consists primarily of flora from the eastern Mediterranean, but also includes specimens from other parts of the world. Today the herbarium hosts approximately 6,000 plant samples, including original samples collected by Dr. George Post, one of the founding members of AUB. These are mentioned in Post's *Flora of Syria, Palestine, and Sinai*. Current work centers on reorganizing, cataloguing, and digitizing the existing animal and plant collections that play important roles in teaching and research. The collection continues to expand with new specimens added from various parts of the country.



## Office of Institutional Research and Assessment (OIRA)

The Office of Institutional Research and Assessment (OIRA) at the American University of Beirut coordinates institutional assessment and research activities. It is responsible for the collection, analysis, and dissemination of accurate and timely information about the University's environment and performance. Furthermore, the office develops and conducts assessments for various purposes at institutional, regional, and international levels.

More specifically, the functions of OIRA are to

- formulate and implement data-gathering activities such as surveys, interviews, and focus groups for a wide variety of internal (e.g., accreditation) and external (e.g., comparison with peer institutions) uses
- coordinate assessment and evaluation of university programs and processes (e.g., registration, admission, advising) to support planning, decision-making, and improvement
- act as a resource and repository for official institutional statistics, information, and policies
- develop, administer, and report assessments required by the University for admission, placement, and other educational purposes
- serve as a testing center for various international administrations and organizations (e.g., ACT, MCAT, CFA, MELAB, and the Open University)
- administer instructor and course evaluations, and provide feedback to faculty members for improvement of teaching

## Office of University Publications

Established in 1970, the Office of University Publications provides marketing and publications services for alumni, students, intellectual and professional communities, and the broader public. The office works closely with others within AUB to define a brand identity for AUB and the Medical Center. To that end, the office is actively engaged in creative concept development and provides graphic design services to generate a range of branding tools including advertisements, publications, and logos. The Office of University Publications is also responsible for producing over 100 official publications including newsletters, brochures, booklets, posters, magazines, and AUB Press books.

## Libraries

The AUB library system consists of two main libraries: the University Libraries and the Saab Memorial Medical Library.

The University Libraries include the Jafet Memorial Library as the central library with two branches: the Engineering/Architecture Library, and the Science/Agriculture Library with its annex AREC (Farm) Library.

The Libraries have a long history in Lebanon and in the region which is very much reflected in the rich collections that they own.

The collections consist of 596,809 volumes, growing at the rate of 11,000 volumes of monographs annually, and 2,432 periodical titles, of which 205 are in Arabic. Access is provided to about 15,756 electronic journals in 113 databases. There are about 1,151,409 audiovisual items of all formats, the majority of which are microforms of a substantial number of local and regional journals and newspapers going back to the early 20<sup>th</sup> century. The Archives and Special Collections contain 1,392 manuscripts, some of which have been appraised as museum pieces; 12,443 volumes of theses, projects and dissertations going back to 1907; as well as 39,139 photographs, 5,889 posters, and 2,038 maps of a unique and historical nature.

These print and electronic collections are developed and enriched on a regular basis to support the academic and research program of the University.

The Libraries are fully automated and many of their resources, databases, electronic books, and references are remotely accessible, providing a modern and virtual environment that is conducive to research. They are equipped with a state-of-the-art electronic classroom and computer labs. Secure and reliable wireless connections are available in all the libraries.

The Libraries provide customized reference and instruction services through e-mails, walk-ins, and in classes, in an active program of user education that promotes a culture of information literacy at all levels.

Researchers from Lebanon, the region, and beyond continuously seek the University Libraries for their unique, rich, and historical collections, particularly on Lebanon and the Middle East.

The University Libraries serve a population of 6500 campus users and are open a total of 90 hours per week. They can be accessed at:<http://staff.edu.lb/~webjafet>.

The Saab Memorial Medical Library SML, (<http://staff.aub.edu.lb/~websml/>) is dedicated to the memory of Dr. Nicholas Saab (AUB School of Medicine graduate, 1959). The library has been functioning in its present quarters as part of the Medical Center since 1975, and qualifies as one of the best medical libraries in the Middle East. Its collection consists of 1,000 printed periodical titles, over 90,000 backfile periodical volumes, nearly 46,000 books, over 2,000 of which are of historical value (such as Avicenna's *Canon of Medicine*, 1593), and nearly 2300 audio-visual items. SML now acts as a hybrid library that is constantly increasing its e-resources while maintaining its traditional services. It has a large number of the most important bibliographic medical and allied health databases, more than 3,500 e-journals, and more than 300 e-textbooks. In 1978 SML was designated by WHO as the National Focal Point for Lebanon. The library has a special collection called the Lebanese Corner, which includes publications about Lebanon, or by Lebanese authors, in the fields of medicine and other health related topics. SML services are provided mainly to AUB clientèle, but also to all other medical and allied health users throughout Lebanon. The library is open 80 hours a week. With its rich, up-to-date medical collection, SML aims to promote research in the medical and allied health fields. SML is a member of three consortiums in Lebanon and the Arab countries, and it provides training to medical librarians and healthcare professionals in Lebanon and the region.