AUB 2004

The year of intensive academic review begun in the winter of 1999 has enabled us to define a number of educational goals and to identify the best routes to achieving them. Most of what we intend to do can be in place by the beginning of the academic year in October 2004. The one possible exception is the re-launching of PhD programs. The time needed to study these programs and to identify their resource costs may take us beyond 2004.

I. Strengthening Liberal Arts Education

In June 2004, we will graduate the first students at AUB to have experienced throughout their undergraduate years the revised liberal arts curriculum. This curriculum, based on distribution requirements, enhanced electives, and the availability of minors, will at once restore practices that have fallen into neglect and take new steps, in keeping with the new century, to providing a unique educational experience in this part of the world. The restructuring of undergraduate education that we propose will be fully implemented beginning in the fall semester, 2001, and for students entering the University in the academic year 2001/02.

Our commitment to revised course of study stems from two concerns. **First**, our natural competition in higher education is not only regional but global. Many of the students whom we want to attract can gain admission to universities in the Middle East, Europe and North America. They will often be offered financial aid packages to attract them. The standards against which we must measure ourselves are themselves global. **Second**, we should be ahead of the curve, and not behind it, in a shift in undergraduate and graduate education that will makes itself felt in the Middle East in the near future. It will be increasingly the case that an undergraduate education alone will not provide a

student with all the skills and training he or she will need to prosper in the 21st century work place. Studies at the MA/MS and PhD levels, with marked specialization, will become the norm.

This means that the undergraduate course of study should be preparation for specialization but not the specialization itself. Moreover, the undergraduate experience must afford the student the opportunity to understand what the various specializations to which she or he might be attracted are about. For those reasons a true liberal arts curriculum at the undergraduate level is perhaps of greater relevance today than ever before.

The Undergraduate Course of Study

We are bound by Lebanese law, if we want our degrees recognized by the Lebanese State, to require at least 90 credits (30 courses) for a three-year course of study. By extension 120 credits would represent a 'normal' four-year course load and requirement. In addition a recognized major or concentration requires 36 credits or 12 courses. In what follows these figures will be used to set the parameters of a redesigned course of undergraduate study.

Our current structures are deficient in two ways: 1) a number of our majors are too course-intensive, unnecessarily increasing departmental teaching loads; 2) our commitment to liberal arts education at present remains at best a slogan.

Liberal Arts Targets

The reality of a liberal arts education can be met by instituting course distribution requirements on a broader scale and in a less mechanical way than is currently our practice. Moreover, those requirements should be met earlier rather than later in the undergraduate experience. It is not enough to expose our students to different modes of

learning and to different substantive fields of knowledge. We must, by early exposure, give them the opportunity to question what they think are their career goals and their intellectual interests. Early exposure may confirm their initial predilections, but we know that inexperienced 17 or 18 year olds, often influenced by their parents' preferences, make early and personally harmful commitments to certain fields and careers. *Choice is a fundamental part of a liberal arts education, and at the AUB we do not currently leave enough room for choice*.

The liberal arts ideals can be better met in a four-year than in a three-year course of study. But even in a 90-credit, 30 course, three-year program, a 12-course, 36 credit major would leave 18 courses for 'exploration'. This is a flexible target. As noted in the Mission Statement, because we offer undergraduate *professional* degrees, as distinct from majors, we must honor the requirements imposed by the Lebanese state in order that the degrees are officially recognized, and in order that their recipients may legally engage in their professions.

Our goal, then, is that either in a four-year or in a three-year course of study, one quarter to one third of all courses would be taken entirely outside one's area of concentration/major. That would mean a minimum of 8-10 courses for sophomores and 11-13 for freshmen. At least half would be taken in the first two years of study.

The objective of distribution requirements would be to expose the student to what might be called different **modes of learning**, and to different substantive areas or **fields of knowledge**. A basic objective is to help students understand *how* to think about problems and how to analyse them. This is as, or more important than *what* they learn. Substance may be forgotten in many instances after graduation; method should stay alive through continuous use. Because specialization will increasingly occur after

undergraduate education, it is essential that undergraduate education impart methods of analysis and thinking about problems that will be applicable in specialized graduate education or in one's chosen career.

The coming era will require greater familiarity with numerical and quantitative analysis than has the present era. The distributional grid presented below reflects that reality.

Modes of Analysis — Fields of Knowledge* (units = credits)

	English and Arabic(9)	Humanities (12)	Economics and Social Sci. (9)	Science, Math, Technology (6)
Seminar (6)				
Laboratory (6)				
Research Project (6)				

*As noted in the Mission Statement, there would be a one-course, no-credit computer requirement.

We must stress that the distribution outlined above is **indicative**. We may want to adjust numbers of credits and fields of knowledge. For example, given the challenges of the coming century we may want to include a course on the environment/ecology as a substantive requirement.

The three modes of analysis are designed to enhance the verbal and interactive skills of students (seminars), the writing and analytic skills (research projects), and hands-on experimental skills (laboratories). Rather than a course specifically devoted to this skill, there could be designated, substantive courses with a specific section devoted to work on writing skills and by which the student could fulfill that requirement. The areas of substantive knowledge are fairly conventional in concept and cover broad fields of human knowledge and creativity. *We feel that they should be taken from the standard*

offerings of their 'home' departments rather than being transplanted as hybrids to other faculties.

The two categories—modes of analysis and fields of knowledge-- overlap and are not additive. All of the 'modes' credits could be met through the 'fields' credits. Either category could count toward prerequisites or required courses for majors. Quantitative requirements could be met in virtually all faculties. Computer courses are available in FEA and FAS. Economics courses are offered, or will be offered, in the Economics Dept., the Institute of Money and Banking, in the Faculty of Agricultural and Food Sciences, and in the future School of Business Administration. *It is not our intention to create new courses expressly to meet the demands arising from distribution requirements. However, existing courses may have to be adapted to accommodate students who may not have the same level or preparation as prospective majors taking the same courses*. It is also the case that many of the distribution requirements will have to be met through courses offered in the FAS.

Getting There

To move in this direction will require changing many aspects of our current programs and assumptions. This is never easy. We will have to facilitate the movement of students among Faculties as they search for courses. We will introduce the option of a minor. That in itself will require careful design so that the minor is clearly and qualitatively distinct from the major.

Second, majors would have to be redesigned, curriculum and course content carefully reviewed, and department- and Faculty-wide consensus developed on what it is an undergraduate should learn or understand before graduating, and what kinds of courses and modes of learning will ensure that she or he reaches the goal. Not only will

the number of courses required be reduced in some instances, so too will the number of courses offered. Such adjustments should make good pedagogic sense; at the same time they should reduce teaching loads.

Let us compare the requirements of three majors at AUB, at AUC, a useful regional comparator, and Princeton, a fine university that emphasizes undergraduate education. The departments were selected because of their importance and because all three institutions have them (AUC has a small engineering program and no medicine, agriculture or public health; Princeton has no medicine, agriculture or public health).[1]

The undergraduate course of study at both AUC and Princeton is four years (2 semesters per year).

AUC		Princeton	
BA	BS	BA	BS
120-26 credits	130-162 credits	96 credits	108 credits

AUC stipulates that all students take distributional requirements in a 40-credit core curriculum (27 'hard' core with no choice; 13 'soft' core with some choice). All credit hours listed below are in addition to the 40 credit hour core. Princeton requires that all students satisfy a one-course, 3-credit writing requirement and 9-12 credits of a foreign language. In addition all students must take 10 courses (30 credits) of distribution requirements: 1 course in epistemology and cognition; 1 in ethical thought and moral values; 1 in historical analysis; 2 in literature and arts; 1 in quantitative reasoning; 2 in science and technology, with laboratory; 2 in social analysis. Every student carries out two semesters of 'independent' work (two courses or 6 credits of supervised research) in their junior year, and every student writes a senior thesis that is the equivalent of two courses. All requirements listed below are in addition to these.

[UNITS ARE IN CREDIT HOURS]

	AUB	AUC	Princeton
Economics	24 prerequisites 36 @210 or above	51 concent. credits	9 prerequisites 27 credits in major*
Physics	15 math requirement 51 physics 9 electives in physics and chemistry	64 concentration 26 chemistry, calculus 6-12 electives	9 pre-requisites 24 'basic' 1 400-level
Mechanical Engineering	150, of which 12 cultural credits 3 English for engineers 12 electives in engineering and related fields	53 core engineering including 'soft' core 49 concentration 21 electives in engineering	12 mathematics 6 physics 3 chemistry 3 computer science 24 upper level engineering

* Economics courses are mostly 'tracked' for different levels of sophistication in math.

The requirements at Princeton are uniformly lighter than at AUC or AUB. AUB's requirements are the heaviest. Both Princeton and AUC require 13 or more courses (40 or more credits) as distribution requirements. Only a minority of these credits will be related to the major or concentration. AUB requires only half that

The Freshman Year

As we gradually rebuild our regional role and profile, the freshman year will take on growing pedagogical importance. It is already important and has been significantly enriched by a more varied menu of courses and improved advising. However, it is still,

reputedly, not a year that sufficiently stimulates or excites in-coming students with a sense of a new educational experience. Rather it builds directly on what the students were doing in high school. It has a remedial quality to it, aiming to ready the freshmen for majors in their sophomore year.

English language proficiency should be demonstrated before the student is admitted. We should, in some cases, encourage intensive language work in the summer preceding entry. If further work is needed it should be carried out as part of a normal course of study in the freshman (and in the sophomore) year.

The freshman year should become attractive and exciting, something that those who enter as sophomores will wish they had taken.

Our challenge in undergraduate education in the next four years is to redesign our professional degree programs so that they maintain their recognized excellency and conform with Lebanese degree requirements while accommodating a much greater range of extra-professional, liberal arts requirements and electives. We are convinced that over specialization at the undergraduate level will become increasingly counter productive in a world where technical professions and technical knowledge are re-invented very few years. We must equip our undergraduates with the learning and analytic skills necessary for constant up-dating and for substantial career shifts. We need to make the slogan 'learning for life' a reality.

II. Teaching Loads, Consolidation, and Research

Despite an enviable teacher-student ratio at the AUB, there are wide-spread complaints about teaching loads. It is often argued that teaching demands stand directly in the path of research productivity. There are clearly viable remedies to this.

1. We propose to put **all** faculty on 9-month contract. For those currently on 11-month contract there would be no reduction in salary. They would have three summer months to carry out research and writing, or to earn extra income from teaching in the summer.

2. Re-designed majors and requirements should lead to course reduction and to lighter teaching loads.

3. We must organize our introductory courses so as to benefit from economies of scale. This means a single faculty member taking on a large introductory course with assistance from advanced graduate students and part time faculty as section heads and graders. We have a limited number of large auditoriums, but the new SIS should help us plan their use.

It is important that the faculty as a whole re-develops the habits--and dare we say, the joy--of continuous involvement in research. We recognize that that will be a function of available time and available resources. In addition to the three steps above that can yield more time for research, it is imperative that we augment URB funds and use them more strategically. We need also to increase funds for 'start-up' grants for new faculty, and for faculty with proven track records in research. It should be possible to buy-out teaching time of, in particular, junior faculty so that they have a reasonable chance to constitute a credible research record. At the same time, faculty members must themselves seek outside funding (sponsored research) through which they can budget to buy out their own teaching time or to provide support in summer months. We aim to

involve our Development Office in raising new funds, and we plan to establish a Grants and Contracts officer to assist faculty members in approaching outside foundations and other sources of research funding.

Finally, research depends on three crucial support elements: libraries, internet access, and well equipped laboratories. Progress is being made on all three fronts and will be carried forward.

Consolidation

We have 53 departments or similar units at the AUB. Each is devoted to an important discipline or field of knowledge. The argument here is not purely one of educational or pedagogical need, but also one of resource use, scale of operation, and administrative use of limited faculty time. We list below all University departments, by Faculty, with the number of faculty in professorial ranks per each department. Some departments and Faculties make heavier use than others of part-time or one-year appointees in non-professorial ranks. For example, the English Dept. lists 17 faculty members in the rank of Instructor. The resort to part-time instruction does add to the administrative burden in those departments and Faculties. Still we feel that faculty in professorial ranks is the common currency across Faculties.

The following figures are based on the 1998/99 Catalogue. Changes occur yearly. Our intention is simply to indicate some orders of magnitude and relative size.

FAS		**FM**	
Department	Faculty no.s	Department	Faculty no.s
Arabic	8	Anesthesiology	15
Biology	11	Biochemistry	3
Business	9	Dermatology	8
Chemistry	9	Diag. radiology	6
CSP	17	Family medicine	8

Economics	5
English	5
Geology	4
History&Arch.	8
IMB	2
Mathematics	13
Philosophy	5
Physics	9
PSPA	10
SBS	7

Morphology	5
Internal medicine	45
Micro-bio.& Immun.	3
Obgyn.	10
Opthamology	6
Otolaring-Head&Neck	6
Pathology&Lab.Med.	11
Pediatrics	12
Pharmacology	5
Physiology	9
Psychology	4
Radiation Oncology	2
Surgery	36
Nursing (School of)	13

FEA

Civil & Environ.	10
Electrical&Computer	13
Mechanical	7
Engineering mgt.	4
Architecture&Design	8

FAFS

Agric. Economics	3
Animal Science	5
CRPP	9
FTNT	5
SIMC	5

FHS

Environ. health	3
Biostat.&Epidem.	3
HBED	2
HSAD	2
MLTP	0
Population	2

DEP

Education	12
SMEC	3
UOP	0

We may aggregate these figures as follows.

Departments by Size of Professorial Faculty

Range	FAS	FM	FEA	FAFS	FHS	DEP	TOTAL
0-4	2	4	1	1	6	2	16
5-9	9	8	2	4	0	0	23

10-30	4	2	2	0	0	1	9
30+	0	2	0	0	0	0	2

We have 39 department We recommend that each Faculty examine the possibility of consolidating smaller departments into larger units and to make sure that only senior faculty be charged with departmental administrative duties. We have some specific suggestions in specific Faculties along these lines.

s with fewer than 10 professorial members and 16 with less than 5. It would be nice if we had the resources to create many more FTEs to increase the size of the smaller departments, but we do not at present have those resources, and, often, it would be infeasible to increase the student body to justify the increased size of the faculty.

The large number of small departments, combined with the rank distribution of our faculty means that it is necessary, sometimes, to assign junior faculty to administrative positions. This does harm to their building an appropriate research and teaching profile. Administration seldom does the academic mind any good. Moreover, each department requires some non-academic support and resources. This makes economic sense only if departments are of a size to create some economies of scale.

Here is how the Chairs of departments broke down by rank in 1998/99:

Rank	FAS	FM	FEA	FAFS	FHS	DEP	TOTAL
Professor	2	15	4	1	2	1	25
Associate	10	4	1	3	1	1	20
Assistant	2	0	0	1	2	0	5
Instructor	0	0	0	0	1	1	2
Lecturer	1	0	0	0	0	0	1

We recommend that each Faculty examine the possibility of consolidating smaller departments into larger units and to make sure that only senior faculty be charged with departmental administrative duties.

III. The Graduate Course of Study

Our focus in **AUB 2004** has been primarily on the undergraduate course of study. That is where our center of gravity lies, and will continue to lie. However we must strengthen and expand our graduate programs. In 1956 Charles Malik, in a report to Acting President Constantine Zurayk, refused to accept the use of the term University with respect to AUB. Instead, because of the absence of a strong, undergraduate liberal arts program *and* the absence of PhD programs, he argued that we should be called the American Institution of Beirut.[2] In the intervening years we made modest progress on both fronts, but during the civil war our few PhD programs were put on hold, and, as indicated above, we did not fully live up to our claims of providing a liberal arts education.

A University must offer the PhD and train doctors. First-rate PhD students are <u>one</u> of the main attractions for first-rate academics. They, alone among students, may have the expertise and sophistication to appreciate the faculty member's current research. They assist the faculty member in research and in teaching. Their ability to find appropriate academic and non-academic work affirms the faculty member's worth and reputation. For all these reasons, the AUB must work toward re-establishing PhD programs.

But we must proceed with extreme caution. PhD programs are very expensive. If we are to compete with leading institutions abroad for high quality graduate students, we must be able to offer the same financial aid, paid research assistantships, and research

infrastructure as our competition. Second, we must have a clear idea of the market for which we are training PhDs. Presumably most of our students will continue to come from the eastern Mediterranean and the Middle East, and most of them may seek to build their careers there. Is the kind of PhD training we hope to provide suitable for the academic and professional markets of our region?

There may be fields of study in which PhD programs can be launched at relatively low cost. These are programs that rely on some combination of library or archival resources, a theoretical focus, and/or data that is specific to our region. Research relying on sophisticated laboratories, experimentation, clinical trials, or data bases not readily available in the region will cost a great deal per student. Then we must add in the costs of financial aid for the best of the PhD candidates.

It will require a separate and extensive University-wide study to determine the best strategy to introduce or re-introduce PhD programs at the AUB.

The MA, MS, MD Degrees

Our current graduate course of study is centered on the above degrees. They can all benefit from careful review beyond what the outside visiting committees have supplied us by way of commentary. It is clear that we follow a course of recruiting graduate students that is not encouraged in North America. We tend overwhelmingly to recruit students directly from our undergraduate programs. It is imperative that we recruit from other institutions. One day the majority of our graduate students should come from other institutions, and when we launch PhD programs it would be desirable that **all** PhD candidates come from other institutions. If we are to recruit such students we will have to rethink the admissions process and send out admissions notices three or

more months earlier than we do now. The GRE along with the MCAT should be a standard part of the application for graduate study.

We need to define carefully what skills and knowledge we are trying to impart in each masters program and for the MD. In many instances we need to re-design the thesis requirement to make it less demanding in both time and size. Masters level students should spend no more than the equivalent of two years in obtaining their degrees.

We should encourage applicants in all disciplines who have put some time between their application and their undergraduate experience. Students who have acquired real world experience usually show greater commitment to their graduate studies and a deeper understanding of why they are pursuing an advanced degree. This will be a requirement of the planned School of Business Administration.

IV. Conclusion

We are confident that the coming years will allow us to establish a healthy balance among an enhanced educational experience for our students, a manageable balance between teaching and research for our faculty, and to take significant steps towards becoming a university in the full sense of the word. As part of this restructuring we aim to become fully accredited in North America in all our programs and professional degrees. It is a hard task before us, but all of the outside review teams have confirmed to us that we have the people to do it.

[1] There is nothing scared about these comparators. Georgia Tech. Purdue, and Illinois, all ABET-accredited in engineering, require more engineering credits than Princeton or MIT, although less than is currently required at the AUB.

[2] Charles Malik, First Interim Report of the University Planning Committee for the Promotion and Development of the Liberal Arts and the Humanities at the University and in the Near East, Beirut, April 10, 1956