

**Faculty of
Agricultural and
Food Sciences
(FAFS)**

Faculty of Agricultural and Food Sciences (FAFS)

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Ali Chalak	Coordinator of Undergraduate Studies Program, Agribusiness Program
Mohamad Talal Farran	Coordinator of Undergraduate Studies

Historical Background

Basic university-level courses in agriculture were offered by the School of Arts and Sciences at AUB as early as 1914. Between the 1930s and 1940s, the university fulfilled its commitment to improving the livelihood of the less fortunate through the creation of the Institute of Rural Life. The Institute brought together students and faculty from various university schools and departments to implement improvement projects in rural health, education and farming. The School of Agriculture was established in 1952, along with the Advancing Research, Enabling Communities (AREC), a 100-hectare facility located in the Bekaa region 80 km away from the main AUB campus. The School offered a four-year program leading to a BS degree in Agriculture and the Diploma of Ingénieur Agricole and offered a one-year Technical Vocational Training (TVT) course, offered to government extension agents from 1956 to 1971. These programs contributed greatly to building the capacity of agricultural scientists and technicians from the Middle East region. A graduate program leading to the MS in Agriculture was initiated in 1956.

The importance of food and nutrition and their linkage to agriculture at AUB was recognized in the late 1970s. The School, which had become the Faculty of Agricultural Sciences in 1958, was renamed the Faculty of Agricultural and Food Sciences (FAFS) in 1979, and a three-year BS program in Nutrition and Dietetics (NTDT) was initiated in 1980. An eleven-month Dietary Internship program was established at the AUB Medical Center in 1983. The program proved very successful and grew rapidly to become a significant component of FAFS. Global and regional changes in the role and functions of agriculture, nutrition and food created a demand for new courses. FAFS responded by launching several new programs. In 2012, a Bachelor of Landscape Architecture was introduced to replace the BS program in Landscape Design and Eco-Management, which started in 2000. The BS program in Food Sciences and Management was launched in October 2002 in response to the rapid expansion of the agrifood industry in Lebanon and the region. Lastly, the importance of entrepreneurship and the need to develop efficient and effective food value chains in the region led to the initiation of the Agribusiness program in February 2009.

Mission

The mission of FAFS is to foster sustainable enhancement of the health and well-being of people and nature throughout Lebanon and the region. To achieve its goals, the faculty uses basic and applied research as well as student-centered learning to prepare leaders and agents of change to address issues of local and global relevance at the nexus of human nutrition, food security and the sustainable use of resources.

Vision

FAFS is a reference academic center specialized in issues of relevance to the Middle East related to agriculture, food, nutrition and the environment for the enhancement of livelihoods, human health and well-being.

Undergraduate Programs

Six undergraduate programs are offered by FAFS:

BS in Agriculture and the Diploma of *Ingénieur Agricole*

This is a four-year multidisciplinary program with the objective of training students in the various theoretical and practical aspects of agricultural sciences. It prepares students to address current agricultural issues at the regional and global levels using their scientific knowledge to improve production and protect the environment.

Bachelor of Landscape Architecture (BLA) and the Diploma of *Ingénieur Agricole*

This is a four-year professional program offered by FAFS which leads to a Bachelor of Landscape Architecture (BLA) and a Diploma of Ingénieur Agricole. The program integrates sciences and the arts as a foundation to design, plan and manage landscapes in natural and urban settings.

BS in Nutrition and Dietetics (NTDT)

This is a three-year program, which will lead to a BS degree in Nutrition and Dietetics (NTDT). The NTDT mission statement is to enhance the nutritional well-being and health of individuals, families and populations through promotion of scholarship in human nutrition and dietetics. The program is science-oriented, student-centered and committed to excellence in teaching, training, research and outreach service. The core values encompass the development of human potential and provide a collegial environment that fosters the professional growth of students for a career in nutrition and dietetics. This diverse and dynamic profession integrates human nutrition, food service administration, food science, biology, chemistry, physiology and interpersonal skills.

BS in Nutrition and Dietetics Coordinated Program (NDCP)

This is a four-year program that leads to a BS degree in Nutrition and Dietetics Coordinated Program (NDCP). The program has a concentration in Medical Nutrition Therapy (MNT) and combines theoretical and experiential learning in Nutrition and Dietetics with at least 1200 hours of supervised practice in affiliated medical facilities. The proposed educational framework is based on the knowledge, skills and core competencies established by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) for entry-level dietitians. Students are first admitted to the didactic Nutrition and Dietetics program and then apply to the NDCP towards the end of their sophomore year in Nutrition and Dietetics after the completion of at least 30 credits. AUB's NDCP has been granted candidacy for full accreditation status by the Accreditation Council for Education in Nutrition and Dietetics of the Academy of Nutrition and Dietetics, (120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995, (312) 899-0040 ext. 5400. Website: <http://www.eatright.org/ACEND>).

This verifies that the program is equivalent and comparable in content and experience to United States-based programs meeting the ACEND accreditation standards. The accreditation makes students eligible to sit for the Commission on Dietetic Registration (CDR) examination for dietitians in the United States in order to obtain the Registered Dietitian (RD) status. The mission of the NDCP is to equip graduates with the knowledge,

expanded skills and intellectual maturity to become progressive, innovative and inter-professional practitioners in the dietetic profession, capable of serving the public through promotion of optimal nutrition, health and well-being and to serve the profession and larger community through public service and leadership.

More specifically, the program involves several interrelated dimensions and is:

- dedicated to providing quality education that prepares students for competent practice and current and future roles in the dietetic profession.
- committed to facilitating the intellectual, personal and professional growth and lifelong learning of students.
- committed to developing critical thinking, problem-solving and leadership skills to prepare students for the challenges of an evolving diverse community and workplace.
- committed to providing an integration of theory with application of learning through a sequence of supervised practice experiences that encourage student self-evaluation and self-direction.
- dedicated to preparing students with added proficiency in providing nutrition education to a variety of clients.
- committed to providing an environment for students to conduct research and develop professional attitudes, maturity and an ethical understanding of professional practice, thereby improving the dietetics practice.
- committed to preparing competent nutrition professionals who perform in adherence to the Code of Ethics for the Profession of Dietetics.

Goals and Expected Outcomes of the NDCP

The goals of the NDCP are listed below; each is followed by supporting program objectives.

- NDCP provides quality didactic and supervised practice learning experiences that prepare graduates to be competent entry-level dietitians: At least 80 (GPA: 3.2) percent of students who enter the NDCP will successfully complete the program and receive a verification statement within four and a half years of enrolment.
- Over a period of five years, at least 80 percent of all graduates of the NDCP who sit for the colloquium/RD exam will pass the first time they take it.
- At least 90 percent of responses that evaluate the competencies attained from the NDCP will meet or exceed a rating of 3 on a 1–5 scale.
- At least 90 percent of ratings of professional preparation from the NDCP graduate's perspective will reach a rating of at least 3 on a 1–5 scale.
- At least 90 percent of ratings of professional knowledge from the employer's perspective will reach a rating of at least 3 on a 1–5 scale.
- NDCP prepares graduates who will commit to improving the quality of life of the community through improved health and well-being.
- Within five years of graduation from the NDCP, employment data will demonstrate that at least 70 percent of all graduates who sought employment will be employed in Lebanon or the Middle East region in a health-related position that requires nutrition expertise.
- TNDCP prepares graduates who will be successfully employed in their fields, attend graduate school or pursue other career options: At least 80 percent of NDCP graduates who have sought higher education will pursue an advanced degree within 12 months of graduation.

- At least 80 percent of NDCP graduates who have sought employment in dietetics will be employed within 12 months of program completion.
- At least 80 percent of employers will indicate that they would hire a graduate of the American University of Beirut NDCP in Nutrition and Dietetics.

Program outcome data are available from the program director upon request.

BS in Food Science and Management

This is a specialized three-year program offered by FAFS to prepare graduates to satisfy the needs of food industries and establishments in the region. Graduates of this program do not receive the Diploma of Ingénieur Agricole.

BS in Agribusiness

The BS in Agribusiness is a three-year cross-disciplinary program designed to provide students with comprehensive knowledge in the decision-making processes of business and the technical aspects of modern agriculture and food systems. Graduates of this program do not receive the Diploma of Ingénieur Agricole.

Admission

AUB admits students from both twelve and thirteen-year secondary school systems. Students holding diplomas from a twelve-year secondary school system may gain admission to the Faculty of Agricultural and Food Sciences by completing the freshman program at AUB or its equivalent elsewhere. Those coming from the freshman program should follow the below table:

Major Requirements / Useful Electives
Agribusiness Completion of MATH 101, MATH 102, any combination of science courses totaling 9 credits, CHEM 200, MATH 204 and courses in the humanities
Agriculture Completion of MATH 101, MATH 102, CHEM 101, CHEM 101L, CHEM 102, CHEM 102L, and BIOL 101, CHEM 200, MATH 204 and courses in the humanities
Food Science and Management Completion of MATH 101, MATH 102, CHEM 101, CHEM 101L, CHEM 102, CHEM 102L, and BIOL 101, CHEM 200, MATH 204, and courses in the humanities and a cumulative average of at least 75 or GPA: 2.7 in the freshman year
Landscape Architecture Any combination of science courses totaling 9 credits, completion of MATH 101 and MATH 102 with a minimum grade of 70 or GPA: 2.2 in each and a cumulative average of at least 75 or GPA: 2.7 in the freshman year, and an elective in each of geology, chemistry, and biology
Nutrition and Dietetics Completion of MATH 101, MATH 102, CHEM 101, CHEM 101L, and a cumulative average of at least 75 or GPA: 2.7 in the freshman year. CHEM 102, CHEM 102L, and BIOL 101 CHEM 200, SOAN 201, and courses in humanities. (Admission is by selection of the most promising eligible applicants)

Students from a thirteen-year secondary school system must hold the Lebanese Baccalaureate Part II in general sciences, life sciences, or sociology and economics, or the equivalent if they come from another country. Holders of Baccalaureate Part II in Humanities may be considered for admission provided they take an additional course, MATH 203. To be considered for admission, students applying for transfer from another faculty or university must have a minimum grade point average of 70 or GPA: 2.3 for Agriculture and for Agribusiness, and 75 or GPA: 2.7 for Nutrition, Food Sciences and Management, and Landscape Architecture. Admission is by selection of the most promising eligible applicants. For complete and detailed information regarding admission to the university, including recognized certificates, see the Admissions section in this catalogue.

Requirements for BS in Nutrition and Dietetics Coordinated Program (NDCP)

Students are first admitted to the three-year Nutrition and Dietetics program. In addition, a separate application for the NDCP must be submitted during the second term of the sophomore year (upon completion of at least 30 credits). The selection of students for the NDCP is based on the cumulative average of the sophomore year (80 or GPA: 3.2 or above, unless stated otherwise by the department) and completion of the prerequisite courses. Individuals interested in applying to the NDCP must contact the department for application details towards the end of the sophomore year.

A maximum of 20 students are admitted each year depending on practicum site availability. Students applying to the NFSC department for a second BS in Nutrition and Dietetics are not eligible for the NDCP.

Transfer to the Nutrition and Dietetics Coordinated Program (NDCP)

In order to be eligible for transfer into the Nutrition and Dietetics Coordinated Program (NDCP), students should first apply for transfer and be accepted into the Nutrition and Dietetics (NTDT) 3-year program. Upon being accepted into NTDT, interested students should fill out a separate application in order to apply for the Nutrition and Dietetics Coordinated Program (NDCP) and will then be considered based on cumulative average of credits completed at AUB as well as availability of spots in the NDCP.

Transfer into the NTDT Program

a) Transfer from Other Faculties at AUB to the Nutrition and Dietetics Program

Students enrolled at other faculties at AUB may apply for a transfer to the NTDT Program. To be eligible for an internal transfer, the applicant must:

- have completed at least 24 sophomore credits,
- not be on probation,
- and have achieved a minimum overall cumulative average of 75 or GPA: 2.7.

Applications of transfer students are evaluated and approved by the department of Nutrition and Food Sciences (NFSC) and the Admission Committee of the faculty. Admission into the program is by selection of the most promising eligible applicants. Top ranking students of the applying pool of students will be selected based on the number of available places in the NTDT for the term in question.

Upon approval of transfer, the student's complete program of study and course requirement is determined by the department.

b) Transfer from Other Universities to the Nutrition and Dietetics Program

Students currently pursuing an undergraduate degree at another university in Lebanon or abroad may apply for transfer to the NTDT Program. To be eligible for admission to AUB and the NTDT Program, the applicant must:

- be transferring from an appropriately accredited university or institution of higher education recognized by AUB,
- have successfully completed at least 30 sophomore credits,
- and have achieved a minimum overall cumulative average equivalent to the AUB average of 75 (or GPA: 2.7). Admission is by selection of the most promising eligible applicants.

Applications of transfer students from other universities are evaluated and approved by the Department of Nutrition and Food Sciences (NFSC) and the Admission Committee of the faculty. Admission into the program is by selection of the most promising eligible applicants. Top ranking students of the applying pool of students will be selected based on the number of available places in the NTDT for the term in question.

As stated in the General University Academic Information section of the catalogue, applicants should meet the Readiness for University Studies in English before registration.

Upon approval of transfer, the student's complete program of study and course requirement is determined by the department. Transfer of courses from other universities is the prerogative of the NFSC department.

Applying to the NDCP After Transfer into the NTDT

a) Transfer students from other faculties within AUB

Transfer students from other faculties within AUB who are accepted into the Nutrition and Dietetics 3-year program should apply separately to the NDCP and may be considered for acceptance into the program based on the number of available places in the NDCP for the term in question after they:

- have successfully completed at least 30 sophomore credits,
- have achieved a minimum overall cumulative average of 80 (or GPA: 3.2).

Admission into the program is by selection of the most promising eligible applicants. Top ranking students of the applying pool of students will be selected based on the number of available places in the NDCP for the term in question.

b) Transfer students from other universities

Transfer students from other universities who are accepted into the Nutrition and Dietetics 3-year program should apply separately to the NDCP. These students may be considered for acceptance on the waiting list of the program based on the number of available places in the NDCP for the term in question after they:

- have successfully completed at least 30 credits at AUB,
- and have achieved a minimum overall cumulative average of 80 (or GPA: 3.2) in courses taken at AUB.

These students may be considered for acceptance into the NDCP as regular students based on the number of available places for the term in question.

It is important to note that credits/courses completed at another institution will not be granted equivalency credits/courses for the NDCP's core courses. Please refer to the appropriate section of the catalogue for the list of the program's core courses and their descriptions.

Requirements for Premedical Study

Students entering the Faculty of Agricultural and Food Sciences and who ultimately intend to enter the Faculty of Medicine must complete the premedical requirements as outlined in the Admissions section under the Faculty of Medicine in the Graduate Catalogue, page 533.

Graduation Requirements

Eligibility for Graduation

To be eligible for graduation with the degree of BS in Agriculture (AGRI) or Bachelor of Landscape Architecture (BLA), and the Diploma of Ingénieur Agricole, a student must:

- complete a minimum of 128 term credit hours (AGRI) or 144 term credit hours (LDAR),
- complete a minimum of seven terms of residency (LDAR),
- complete a minimum of seven terms of residency (AGRI),
- achieve an overall minimum grade average of 70 (or GPA: 2.2), and
- be approved for graduation by the faculty.

To be eligible for graduation with the degree of BS in Nutrition and Dietetics (NTDT), BS in Food Sciences and Management (FSMT) or BS in Agribusiness (AGBU), a student must:

- complete a minimum of 97 term credit hours for the NTDT program: 97 term credit hours for the FSMT program and 96 term credit hours for the AGBU,
- complete a minimum of five terms of residency,
- achieve an overall minimum average grade of 70 (or GPA: 2.2), and
- be approved for graduation by the faculty.

To be eligible for graduation with the degree of BS in Nutrition and Dietetics Coordinated Program (NDCP), a student must:

- complete a minimum of 133 credits hours,
- complete a minimum of 1200 hours of supervised practice in an affiliated hospital,
- achieve an overall minimum average grade of 80 (or GPA: 3.2) in each of the three years of NDCP,
- achieve an overall minimum average grade of 80 (or GPA: 3.2) in the supervised practice, and
- complete the program within four and a half years of enrolment in NDCP.

Failure to meet the above NDCP graduate requirements will result in dismissal from the NDCP program in which case students will graduate with a BS in Nutrition and Dietetics (NTDT).

Minors in Nutrition and Dietetics and Food Science and Management

The Nutrition and Food Sciences Department offers two minors: a minor in Nutrition and Dietetics and a minor in Food Sciences and Management with a minimum of 16 credits/program.

Students already working on a bachelor's degree outside Nutrition and Dietetics (NTDT) or Food Sciences and Management (FSMT) and who wish to obtain a minor in NTDT or FSMT must apply to the relevant minor before taking any course in the requested minor. The Department of Nutrition and Food Sciences evaluates all applicants for a minor and makes recommendations to the Academic and Curriculum Committee (ACC).

A student is eligible to be considered for a minor in either major after completing 24 credit hours in her/his major with a cumulative grade average of 75 (or GPA: 2.7).

The courses required for a minor in Nutrition and Dietetics are NFSC 221, NFSC 222, NFSC 240, NFSC 265, NFSC 274, NFSC 285 and NFSC 281. Additional courses may be required from Agriculture and Food Sciences and Management students to replace required courses common to the major and minor and/or to fulfill pre-requisite courses.

The courses required for a minor in Food Sciences and Management are NFSC 265, NFSC 278, NFSC 282, NFSC 288, MNGT 215 and MKTG 210. Additional courses may be required from Agriculture and Nutrition and Dietetics students to replace required courses common to the major and minor and/or to fulfill prerequisite courses.

Minor in Agribusiness

The courses required for a minor in Agribusiness are AGBU 210, AGBU 213, AGBU 229 or AGBU 236, AGBU 239, AGBU 240, AGBU 248 and AGBU 292.

Minor in Food Systems

Food security, climate change and depletion of natural resources are now major concerns at the national and global levels. The vital need for sustainable production techniques able to reconcile economic profitability and environmental preservation is exerting an increasing pressure on public policies and agendas. The interdependence of these concerns requires the development of a comprehensive and multidisciplinary approach to food systems.

Goal

This interdisciplinary minor in Food Systems equips students with the knowledge and skills required to develop a comprehensive view and understanding of the different yet interdependent stages of food systems including food production, processing, marketing, distribution and consumption. 18 credit hours are required; 3 credits of each of the majors listed below.

List of Courses for the Minor in Food Systems

NFSC 220, NFSC 252, LDEM 211, AVSC 220, AGSC 203 and AGBU 210.

Learning Outcomes

- Identify key stages of food-product development
- Acquire knowledge and practical skills in land preparation, farm irrigation methods and water measurement techniques
- Develop an awareness of safe working environment and monitoring sustainable practices in livestock and field crop production
- Determine the usefulness and limitations of various techniques in food production and processing practices and assessing their impact on human health
- Understand concepts of environmental horticulture and their role in promoting nature conservation
- Develop marketing and distribution strategies to promote food products

Second BS Degree

To obtain a second BS in Agriculture and the Diploma of Ingénieur Agricole, a student must:

- complete all AGRL III and AGRL IV courses, including all FAFS electives and humanities courses. Applicants who have a BS degree in Food Science and Management, Agribusiness, Biology, Chemistry, or Environmental Health do not need to take any additional prerequisite courses.

Holders of BS degrees from other majors will be required to:

- complete additional prerequisite courses as recommended by the Admissions Committee and approved by the Academic and Curriculum Committee for holders of BS degrees other than the above mentioned majors .
- complete at least five terms of residency at FAFS.

To obtain a second BS in Agribusiness¹, a student must complete:

- a minimum of 54 credits while registered in FAFS, including all AGBU II and AGBU III required core courses listed in this catalogue (of which up to 15 credits can be from transferred course credits).
- additional prerequisite courses as recommended by the Admissions Committee and approved by the Academic and Curriculum Committee.

To obtain a second BS in Nutrition and Dietetics, a student must complete:

- a minimum of 52 credits while registered at FAFS, including all NTDT II and NTDT III required core courses listed in this catalogue (of which 15 credits can be transferred course credits).
- additional prerequisite courses as recommended by the Admissions Committee and approved by the Academic and Curriculum Committee.
- at least three terms of residency at FAFS.

To obtain a second BS in Food Science and Management, a student must complete:

- a minimum of 53 credits while registered in FAFS, including all FSMT II and FSMT III required core courses listed in this catalogue (of which up to 15 credits can be from transferred course credits).
- additional prerequisite courses as recommended by the Admissions Committee and approved by the Academic and Curriculum Committee.
- at least three terms of residency at FAFS.

1) Does not apply to Agriculture students

Double Major

Students may, upon approval of the faculty concerned, earn a double major if the two majors fall within the same degree structure (that is, both are BS majors) and if the graduation requirements for both majors are met simultaneously. The student must also satisfy requirements of both majors and complete a minimum of 127 credits hours. Note that both majors must lead to the same bachelor's degree and one diploma will be issued indicating both majors.

Dual Degree

Students may, upon approval of the faculty concerned, complete the requirements for a second degree while registered in another faculty at AUB. In such a case, a student will be granted two degrees at the same time of graduation. If tuition fees differ, students will pay the higher of the two fees.

Information about deadlines and applications are available on the following link: <http://www.aub.edu.lb/registrar/Documents/pdfdoc/dualdegree.pdf>

Transfers

To transfer to the Faculty of Agricultural and Food Sciences from another faculty or university, course credits pertinent to the agricultural curriculum may be transferred at the discretion of the Academic and Curriculum Committee. However, advanced standing can be considered only for students who transfer from an agriculture program of another recognized institution of higher learning. Transfer students from faculties within AUB to FAFS are allowed to transfer a maximum of two terms toward the residency requirements at FAFS based on the rate of equating each 12 credits of transferable courses taken at AUB to one residency term. For purposes of residency requirements, two summer sessions are equivalent to one term.

Students wanting to transfer to another faculty must take at least 50 percent of their courses at FAFS including one FAFS course (2 or 3 cr.) in the corresponding major per term. Students who do not register at least 50 percent of courses required by their major in the first term will automatically be given the status of majorless in the second term. A student should transfer after two terms; if s/he fails to secure acceptance to the desired major by the end of the second term, s/he will be dropped from the faculty.

Transfer of Courses

Transfer of basic science courses taken at AUB with a minimum grade of 60 (GPA: 1.0) is allowed if these are also required courses in the core programs of FAFS. A minimum grade of 70 (or GPA: 2.2) is required for transfer of elective courses. Students wishing to transfer one or more required or elective courses should submit a written request to the Academic and Curriculum Committee.

Elective Courses

Candidates for the degree of BS in Agriculture must complete 27 credits of elective courses: 9 credits of elective courses in FAFS, 12 credits in the humanities and 3 credits in the social sciences.

Candidates for the degree of Bachelor of Landscape Architecture (BLA) must complete 27 credits of elective courses: 12 credits of concentration courses in Agriculture, 6 credits in the humanities, 6 credits in the social sciences, 3 credits in the quantitative thought and 3 credits in the natural sciences.

Candidates for the degrees of BS in Nutrition and Dietetics and BS in Food Sciences and Management must complete a minimum of 12 credits in the humanities.

Candidates for the degree of BS in Agribusiness must also complete 12 credits in the humanities.

Academic Rules and Regulations

Changes made after the publication of this catalogue will be available through academic advisors or coordinators.

Refer to General University Academic Information in this catalogue for information on the following: maximum course loads (under Credit Loads), dismissal from the faculty and readmission, classes and laboratories (under Attendance), incomplete grades (under Incompletes), examinations and quizzes (under Attendance), withdrawal from courses, students not working for a degree (under Categories of Students), repeating courses, placement on academic probation and removal from academic probation.

Students enrolled in the BS in Nutrition and Dietetics (Coordinated Program) should refer to the Nutrition and Dietetics Coordinated Program Student Handbook for specific program policies and procedures.

Classification and Promotion

BS in Agriculture and Diploma of Ingénieur Agricole

For clear promotion from year I to year II, a student must complete a minimum of 27 credits. For promotion from year II to year III, a student must complete a minimum of 58 credits. For promotion from year III to year IV, a student must complete a minimum of 98 credits. All such credits should be from courses specified in the regular program.

Bachelor of Landscape Architecture (BLA) and Diploma of Ingénieur Agricole

For clear promotion from year I to year II, a student must complete a minimum of 35 credits. For promotion from year II to year III, a student must complete a minimum of 74 credits. For promotion from year III to year IV, a student must complete a minimum of 110 credits. All such credits should be from courses specified in the regular program.

BS in Nutrition and Dietetics or in Food Science and Management

For clear promotion from year I to year II, a student must complete a minimum of 30 credits. For promotion from year II to year III, a student must complete a minimum of 63 credits. All such credits should be from courses specified in the regular program.

BS in Nutrition and Dietetics-Coordinated Program

For clear promotion from year I to year II, a student must complete a minimum of 30 credits. For promotion from year II to year III, a student must complete a minimum of 63. For promotion from year III to year IV, a student must complete a minimum of 97 credits. All such credits should be from courses specified in the regular program.

BS in Agribusiness

For clear promotion from year I to year II, a student must complete a minimum of 30 credits. For promotion from year II to year III, a student must complete a minimum of 60 credits. All such credits should be from courses specified in the regular program.

Eligibility for the Regular AREC Program

To be eligible to enroll in the regular program at AREC during the third year of Agriculture, a student must:

- complete a minimum of 58 credits by the end of the first term of Agriculture III with a cumulative grade average of higher than 70 (or GPA: 2.2) and must not have accumulated more than 12 credits of failed and/or missed courses (of which no more than 6 credits are failed courses) specified in the regular program.
- be approved for such action by the Academic and Curriculum Committee.

Curricula

Curriculum for the BS Degree in Agriculture and Diploma of Ingénieur Agricole

Year I

First term		Credits
AGSC 205	The Food Odyssey	3
BIOL 200	Diversity for Life	4
CHEM 208	Brief Survey of Organic Chemistry	3
ENGL 203	Academic English	3
CMPS 209	Computers and Programming for the Sciences	3
		Total 16

Second term		Credits
ARAB	Arabic Communication Skills	3
NFSC 261	Biochemistry	3
AGSC 206	Agriculture and the Environment	3
MATH 204 or 201	Mathematics for Social Sciences II	3
ENGL 204	Advanced Academic English	3
		Total 15

Year II

First term		Credits
AGSC 212	Microeconomic Theory of Food and Farming	3
AGSC 207	Land and Water Resources	3
AVSC 275	Anatomy and Physiology of Farm Animals	3
AVSC 243	Genetics and Biotechnology	3
AGSC 220	Principles of Plant Physiology	3
		Total 15

Second term		Credits
STAT 210/ NFSC 210	Elementary Statistics for the Sciences	3
AVSC 224	Agricultural Microbiology	3
AGBU 213	Legal and Policy Aspects of the Agriculture Sector	3
AGSC 225	Rural Community Development	3
Humanities Elective		3
		Total 15

Year III

First term		Credits
AGSC 230	Crop Systems	3
AGSC 233	Plant Health-I	3
AGSC/AVSC 234	Chemicals in Agriculture	3
AGSC 252	Conservation Agriculture	3
AGBU 240	Career Planning Workshop for Agribusiness	0
Humanities Elective		3
		Total 15

Second term (AREC)		Credits
AGSC/AVSC 222	Farm Practices	1
AGSC 244	Agricultural Water Technologies	3
AGSC 245	Plant Health-II	3
AGSC/AVSC 250	Organic Farming	3
AVSC 223	Livestock Systems	3
AGSC/AVSC 246	Intensive Agriculture	3
		Total 16

Summer Session (AREC)		Credits
AGSC 223	Agricultural Project and Entrepreneurship	2
AGSC 247	Farm Power and Alternative Energy	3
AGSC 235	Agricultural Extension in Development	2
AGBU 256	Summer Internship	1
		Total 8

Year IV

First term		Credits
AGSC 249	GIS for Agriculture	3
AGSC 257	Emerging Issues in Agriculture: Networking with the Private Sector	1
AGSC/AVSC	Concentration Courses	3
AGSC 265	Soils and Fertility	3
Social Science Elective		3
		Total 13

Second term		Credits
AGSC/AVSC	Concentration Courses	9
AGSC/AVSC 298	Capstone Course: From Seed to Table	3
Humanities Elective		3
		Total 15

Curriculum for the Bachelor of Landscape Architecture and Diploma of Ingénieur Agricole¹

Year I

First term		Credits
LDEM 202	Studio I: Landscape Design Fundamentals	4
LDEM 200	Landscape Technical Drawing	4
LDEM 214	Landscape and Geomorphology	3
LDEM 207	Landscape Architecture History I	3
ENGL 203	Academic English	3
		Total 17
Second term		Credits
LDEM 216	Studio II: Landscape Garden Design	4
LDEM 201	Landscape Descriptive Drawing	4
LDEM 217	Soils in the Landscape	3
LDEM 291	Surveying and Base Plan Development	3
LDEM 211	Landscape Horticulture	3
		Total 17
Summer Session		Credits
LDEM 252	Computer Aided Design	3
LDEM 219	Plant Material I	2
		Total 5

Year II

First term		Credits
LDEM 222	Studio III: Landscape Planting Design	4
LDEM 210	Botany and Plant Ecology for Landscape Architects	3
LDEM 247	Site Engineering I	3
LDEM 221	Plant Material II	1
	Humanities Elective	3
	Natural Sciences Elective	3
		Total 17
Second term		Credits
LDEM 204	Studio IV: Cultural Landscape Design	6
LDEM 208	Landscape Architecture History II	3
LDEM 248	Site Engineering II - Construction Material	3
LDEM 263	Landscape Appreciation and Site Analysis	3
		Total 15

1) A minimum of 144 credits required for graduation

Summer Session		Credits
LDEM 249	Site Engineering III - Design Implementation	4
LDEM 231	Sustainable Water Management Techniques	3
		Total 7

Year III

First term		Credits
LDEM 228	Studio V: Urban Landscape Design	6
LDEM 251	Geographic Information System (GIS)	3
LDEM 218	Landscape Ecology	3
Social Sciences Elective		3
		Total 15

Second term		Credits
LDEM 246	Studio VI: Natural Landscape Design	6
LDEM 265	Landscape Management	3
Quantitative Thought Elective	Any course from the GE list, except; MATH 203 (only students coming from Humanities school background can take it); EDUC 271, EPHD 203 and NURS 203	3
LDEM 290	Professional Practice	3
		Total 15

Summer Session		Credits
LDEM 292	Internship (Practicum)	2
FAFS Elective		3
		Total 5

Year IV

First term		Credits
LDEM 241	Studio VII: Landscape Capstone Project I	4
LDEM 260	Contemporary Issues in Landscape Architecture	3
FAFS Elective		3
Social Science Elective		3
ENGL 204	Advanced Academic English	3
		Total 16

Second term		Credits
LDEM 242	Studio VIII: Landscape Capstone Project II	6
ARAB	Arabic Communication Skills ¹	3
FAFS Electives		3
Humanities Elective		3
		Total 15

1) The Arabic Placement Test is optional.

Curriculum for the BS Degree in Nutrition and Dietetics (NTDT)¹

NTDT I

First term		Credits
BIOL 201	General Biology I	4
CHEM 200	Basic Chemistry and Applications	3
CHEM 205	Introductory Chemistry Laboratory	2
ENGL 203	Academic English	3
PSYC 201	Introduction to Psychological Science	3
		Total 15

Second term		Credits
CHEM 208	Brief Survey of Organic Chemistry	3
CHEM 209	Introductory Organic Laboratory	2
ENGL 204	Advanced Academic English	3
PHYL 246	Physiology for Nursing Degree Students and Undergraduates ³	4
NFSC 221	Basic Nutrition ²	3
		Total 15

NTDT II

First term		Credits
AGSC 212	Microeconomics Theory of Food and Farming ²	3
NFSC 274	Human Nutrition and Metabolism	3
NFSC 290	Food Service Management ²	3
NFSC 261	Introductory Biochemistry ²	3
NFSC 240	Nutrition Status Assessment ²	2
MNGT 215	Fundamentals of Management and Organizational Behaviors	3
		Total 17

Second term		Credits
ARAB 201 or higher	Arabic Communication Skills ³	3
NFSC 285	Nutrition in the Life Cycle	2
NFSC 281	Nutrition in the Life Cycle Lab for NTDT	1
NFSC 265	Food Chemistry ²	3
NFSC 267	Food Analysis ²	2
NFSC 229	Menu Planning	1
Humanities Elective		3
		Total 15

1) A minimum of 97 credits required for graduation

2) Course offered in Fall and Spring

3) The Arabic Placement Test is optional

NTDT III

First term		Credits
NFSC 210	Statistics in Nutrition and Food Science ¹	3
NFSC 222	Community Nutrition	3
NFSC 277	Food Microbiology ¹	3
NFSC 292	Medical Nutrition Therapy I	3
NFSC 294	Medical Nutrition Therapy Lab I for NTDT	1
Humanities Elective		3
		Total 16
Second term		Credits
CMPS 209	Computers and Programming for the Sciences	3
NFSC 287	Food Processing ¹	2
NFSC 289	Food Processing Lab ¹	1
NFSC 293	Medical Nutrition Therapy II	3
NFSC 295	Medical Nutrition Therapy Lab II for NTDT	1
NFSC 296	Current Topics in Food Sciences and Nutrition ¹	1
NFSC 299	Projects in Nutrition and Food Sciences ¹	2
Humanities Elective		3
Humanities Elective		3
		Total 19

1) Course offered in Fall and Spring

Curriculum for the BS Degree in Nutrition and Dietetics Coordinated Program (NDCP)¹

NTDT I

First term		Credits
BIOL 201	General Biology I	4
CHEM 200	Basic Chemistry and Applications	3
CHEM 205	Introductory Chemistry Laboratory	2
ENGL 203	Academic English	3
PSYC 201	Introduction to Psychological Science	3
		Total 15

Second term		Credits
CHEM 208	Brief Survey of Organic Chemistry	3
CHEM 209	Introductory Organic Chemistry	2
PHYL 246	Physiology for Nursing Degree Students and Undergraduates	4
ENGL 204	Advanced Academic English	3
NFSC 221	Basic Nutrition ²	3
		Total 15

NDCP II (Juniors)

First term		Credits
AGSC 212	Microeconomics Theory of Food and Farming ²	3
NFSC 240	Nutrition Status Assessment	2
NFSC 261	Introductory Biochemistry ²	3
NFSC 274	Human Nutrition and Metabolism	3
MNGT 215	Fundamentals of Management and Organizational Behavior	3
Humanities Elective		3
		Total 17

Winter Session		Credits
NFSC 225A	Job Shadowing	0
		Total 0

1) A minimum of 133 credits required for graduation

2) Course offered in Fall and Spring

Second term		Credits
ARAB 201 or higher	Arabic Communication Skills ¹	3
NFSC 285	Nutrition in the Life Cycle	2
NFSC 265	Food Chemistry ²	3
NFSC 267	Food Analysis ²	2
NFSC 286	Nutrition in the Life Cycle Lab for NDCP	1
NFSC 290	Food Service Management ²	3
NFSC 229	Menu Planning	1
		Total 15

Summer Session		Credits
CMPS 209	Computers and Programming for the Sciences	3
NFSC 225B	Job Shadowing	0
	Humanities Elective	3
		Total 6

NDCP III (Seniors)

First term		Credits
NFSC 210	Statistics in Nutrition and Food Science ²	3
NFSC 222	Community Nutrition	3
NFSC 277	Food Microbiology ²	3
NFSC 292	Medical Nutrition Therapy I	3
NFSC 279	Medical Nutrition Therapy Lab I for NDCP	1
	Humanities Elective	3
		Total 16

Winter Session		Credits
NFSC 298W	Dietetic Practicum	1
		Total 1

Second term		Credits
NFSC 287	Food Processing ²	2
NFSC 289	Food Processing Lab ²	1
NFSC 293	Medical Nutrition Therapy II	3
NFSC 297	Medical Nutrition Therapy Lab II for NDCP	1
NFSC 224	Advanced Nutrition Principles and Practices	1
NFSC 296	Current Topics in Food Sciences and Nutrition ²	1
NFSC 299	Projects in Nutrition and Food Sciences ²	2
NFSC 275	Quantity Food Production	2
	Humanities Elective	3
		Total 16

1) The Arabic Placement Test is optional.

2) Course offered in Fall and Spring

Summer Session (May-June)		Credits
NFSC 298SU	Dietetic Practicum	1
		Total 1

NDCP IV

First term		Credits
NFSC 283	Nutrition Education and Communication	3
NFSC 284A	Seminar in Clinical Dietetics	1
NFSC 298F	Dietetic Practicum	13
		Total 17

Second term		Credits
NFSC 284B	Seminar in Clinical Dietetics	1
NFSC 298S	Dietetic Practicum	13
		Total 14

Curriculum for the BS Degree in Food Science and Management¹

Food Science and Management I

First term		Credits
BIOL 200	Diversity of Life	4
CHEM 200	Basic Chemistry and Applications	3
CHEM 205	Introductory Chemistry Laboratory	2
ENGL 203	Academic English	3
MATH 204	Mathematics for Social Sciences II	3
		Total 15

Second term		Credits
CHEM 208	Brief Survey of Organic Chemistry	3
CHEM 209	Introductory Organic Laboratory	2
ENGL 204	Advanced Academic English	3
AGSC 212	Microeconomics Theory of Food and Farming ²	3
NFSC 221	Basic Nutrition ²	3
Humanities Elective		3
		Total 17

Food Science and Management II

First term		Credits
NFSC 210	Statistics in Nutrition and Food Science ²	3
MNGT 215	Fundamentals of Management and Organizational Behavior	3
NFSC 261	Introductory Biochemistry ²	3
NFSC 265	Food Chemistry ²	3
NFSC 267	Food Analysis ²	2
NFSC 277	Food Microbiology I ²	3
		Total 17

Second term		Credits
ACCT 210	Financial Accounting	3
ARAB 201 or higher	Arabic Communication Skills ³	3
CMPS 209	Computers and Programming for the Sciences	3
NFSC 272	Introduction to Food Service and Industries	2
NFSC 278	Food Microbiology II	3
Humanities Elective		3
		Total 17

1) A minimum of 97 credits required for graduation

2) Course offered in Fall and Spring

3) The Arabic Placement Test is optional.

Summer Session		Credits
NFSC 280	Summer Training in Food Establishments	1
		Total 1

Food Science and Management III

First term		Credits
ACCT 215	Management Accounting	3
NFSC 282	Food Quality Management	3
NFSC 288	Technology of Food Products	3
FINA 210	Business Finance	3
Humanities Elective		3
		Total 15

Second term		Credits
MKTG 210	Principles of Marketing	3
NFSC 287	Food Processing ¹	2
NFSC 289	Food Processing Lab ¹	1
NFSC 291	Elements of Food Engineering	3
NFSC 296	Current Topics in Food Sciences and Nutrition ¹	1
NFSC 299	Projects in Nutrition and Food Sciences ¹	2
Humanities Elective		3
		Total 15

1) Course offered in Fall and Spring

Curriculum for the BS Degree in Agribusiness¹

Agribusiness I²

First term		Credits
AGSC 204	Natural Sciences for Agribusiness	3
AGBU 211	Introduction to Agricultural Issues and Policies	3
CMPS 209	Computers and Programming for the Sciences	3
ENGL 203	Academic English	3
MATH 204	Mathematics for Social Sciences	3
		Total 15
Second term		Credits
ACCT 210	Financial Accounting	3
AGSC 202	Introduction to Land and Water Resources	3
AGSC 203	Crop Production and Protection	3
ARAB	Arabic Communication Skills ³	3
ENGL 204	Advanced Academic English	3
		Total 15

Agribusiness II

First term		Credits
ACCT 215	Management Accounting	3
AGSC 212	Microeconomics Theory of Food and Farming ²	3
AGBU 239	Agribusiness Communication Skills Workshop	0
NFSC 252	Food Processing ²	3
NFSC 210	Statistics in Nutrition and Food Science	3
Humanities Elective	To be chosen from PHIL 206 or PHIL 209	3
		Total 15
Second term		Credits
AGBU 210	Marketing in Agribusiness	3
ECON 212	Elementary Macroeconomic Theory	3
AGSC 253	Harvest and Post-harvest Issues and Strategies	3
AGBU 255	Field Study of the Rural Agro-economy	3
AVSC 220	Livestock Production and Protection	3
		Total 15
Summer Session		Credits
AGBU 229	Entrepreneurship in Agriculture (Theory + Project)	3
AGBU 256	Summer Internship	1
		Total 4

1) A minimum of 96 credits required for graduation

2) Course offered in Fall and Spring

3) The Arabic Placement Test is optional.

Agribusiness III

First term		Credits
AGBU 236	New Trends in Agricultural and Food Systems	3
AGBU 240	Career Planning Workshop for Agribusiness	0
FINA 210	Business Finance	3
INFO 200	Foundations of Information Systems	3
MNGT 215	Fundamentals of Management and Organizational Behavior	3
Humanities Elective		3
		Total 15
Second term		Credits
AGBU 213	Legal Aspects of Agribusiness	3
AGBU 248	Operation Management for Agribusiness	3
AGBU 292	Agribusiness Final Year Project (capstone course)	5
Humanities Elective		3
Humanities Elective		3
		Total 17
		Total Credit Hours 96

1) Course offered in Fall and Spring