Didactical concept

Our university pays close attention to the practice of teaching, closely associated with that of learning. We will be attentive to the diversity of forms of knowledge and teachable materials.

The teacher-learner relationship focuses on the teacher's presentation of scientific knowledge and its acquisition by the student. This relationship involves objectives, methods and content, and develops a large current of exchanges through different forms of expression among which oral and written are most notable.

It may seem difficult to observe the passage of ideas and representations between two or more minds in a direct way, but it remains possible to control the inputs and outputs. On the input side, university enrolment gives rise to a language placement test. Language is an indispensable channel for the transmission and access to information, requiring a general skill of understanding and expression, whether in face-to-face courses, library consultations or in the use of computer tools. A Language Centre has been set up at the university in order to place students at the time of enrolment in language courses according to their level. Entrance competitions are a second method of controlling inputs when registering, this time for the content of the subjects to be acquired by the student, i.e. a compulsory competition in the Faculty of Engineering has been instituted. Exams, finals and senior graduating projects figure as output. Although the idea of a relationship in which the student presents himself as a blank page on which the teacher registers acquired knowledge is currently completely discarded. Contemporary studies aware that we are facing a dynamic with three poles: program design, knowledge transmission, and knowledge acquisition.

An essential part of the teaching relates to the basic scientific concepts, in theoretical works and textbooks. In this respect, we remain attentive to the distinction introduced by Bachelard (1938) between research-sanctioned theories and evidence and outdated theories. This implies an essential work of periodic updating (take back the latest edition of manuals on the theme, technology watch, scientific journals, international colloquiums, etc.) The difficulty in this area arises from the fact that certain essential conceptions may move away from common sense data, and the example of Galileo and Newton's physics, whose law of inertia challenges current intuition, is usually given here. This kind of difficulties can occur in the learner a spontaneous interpretation that prevents his understanding. Epistemology describes these difficulties as obstacles that call for a break with previous representations. The thinking experience about the wheelbarrow launched which advances without encountering any external objects, allows Einstein and Infeld (1936) to indicate a path of conciliation. Recent studies in neurosciences are currently exploring the field of epistemological barriers (Caussidier and Molinetta, 2018) But epistemological barriers are not unique to physics and the teacher should always be warned.

The practice of research has its own conditions. Claude Bernard describes (1865) the ideal path of the experimental approach (through the observation/ problem/ hypothesis/ experiment/ verification

and interpretation succession). He warns, however, that observation cannot already be done without theory or prior representation. The experimental path itself is punctuated by trials and errors corrected. His biographer M. D. Grmek (1973) states that "in the face of new developments, Claude Bernard, giving free rein to his imagination, invented several possible hypotheses and, depending on the inferences arising from them, implemented experiments that confirmed or reversed his assumptions." Logic and imagination participate together and intersect in each research in an original way that can be sanctioned by proof of its fertility.

Research, including basic research, use technical montages and has know-how whose teachable character is determined in a specific way. From this point of view, the ingenuity of the technician is indispensable and feeds on experience, exercise and practice. An important part of design is to combine elements of autonomous knowledge and practices, even disparate, such as the brilliant application of Boole's algebra to Shannon's electrical current. The teacher should know that a complete handbook or a comprehensive guide to know-how is desirable, but that it will never be achieved or closed. From this point of view, the term applied science represents an ideal that does not prevent a sophisticated technique from existing before and independently of the theory that justifies it, as in the classic example of the steam engine invented by James Watt in the sixties of the 18th century and which finds its theory only with Carnot (1820). But on the other hand, the shift to theory confers a general value.

These historical examples also help to describe the dynamic aspects of the learning, depending on the objectives of understanding the concepts, the implementation of a design work and the realization of a technical task. By presenting the objective of the course, the teacher integrates these data that allow him to follow the student's learning path as well as his progress, through the system of continuous control, directed work and training exercises. Each element of the course is thus approached from a two-point of view conceptual and practical, giving rise to a personalized follow-up of the progression of the learner.

Initially, our programs were developed in accordance with the directives of our authorization decree and according to the missions entrusted to it: to support scientific and technical developments and to establish links with the world of production and work. Tutorials, lab work were developed with an orientation toward applied research. Internship periods in companies ensure links with the professional world. Preparation for working life and monitoring of internship students are provided by a special university office. Important attention is paid to the acquisition of professional behaviour.

To develop a program of study in a discipline, we start from the state of our current knowledge and the definition of the question/problem of the day (Popper, 1972). This work uses specialized and extensive knowledge. In concrete terms, we proceed in a way that goes from the general to the particular, taking an overview of the history of the formation of its basic concepts, pointing out the learning difficulties they can present as well as the educational and laboratory tools essential for their teaching and acquisition. From this point of view, our collaboration with partner universities is of great use. At the same time, we examine the perspectives of applied research that can be developed. Secondly, we look at the place of the program in the whole curriculum, specifying the requirements it calls. Finally, we look at the social demand to which the program can respond. The

issue of renewable energy or waste treatment, but also the innovating management programs, can be used here as an illustration.
The diversity of the fields of teaching as well as the implementation of applied research and work have led to the introduction of training in general culture, epistemology and ethics, which are listed, alongside languages, as requirements of the university, approached in a spirit of openness to others and respect for differences. Our university presents an environment dedicated to teaching and research, structured by regulation and a system of reciprocal expectations. Students are recognized as being free, autonomous and responsible for their choices and actions. It recognizes their rights (access to collective equipment, Wi-Fi, laboratories, sports halls, catering rooms, participation in cultural and associative activities), a set of rights as necessary to prepare them for their role as a future citizen. The university expects them to respect the rules, other people, equipment, etc. On the other hand, more implicit expectations from students must be met, such as having a quality education given by competent people, a fair and equitable review system and validation of the fruits of one's efforts.

Upon enrolment, students must adhere to a contract of studies that is established with a coordinator designed by the university who helps them clarify their choices and who plays a role of accompanist and adviser throughout their university career. The study contract specifies the conditions for acquiring the graduate degree, the current presence and the success of the exams, internships and internship reports that students must present, as well as the project of completion of studies which must be validated by a jury that establishes a critical assessment of the entire training course in terms of knowledge, know-how and professionalizing behaviours acquired,

The university is also a place of life for sharing meals, with walking and exercise areas of various activities. And it is often in these places of informal exchanges that questions of actuality with strong ethical implications are debated. In addition to the teacher-student interactions, there are also the interactions, as essential, between classmates. The experience of distance education, to which we are given the pandemic of the coronavirus, invites us to renew our view of this unique place that is a classroom. Our relationship to the machine, as a communication intermediary, extends to cover new field of virtual space that must be considerate with clarity and rigor, as much as science in its beginning critically conceived our senses as a medium between our brain and the world.

As a result, our didactic concept makes use of the above methods and results in our faculty preparing their lesson(s) plan(s) consisting of a lecture(s), large group discussions, case studies analysis, presentations on relevant and pressing issues in the workplace, linked to the theories of our classrooms, applied concepts in laboratories, research projects, debates (where possible), continuous written assessment of gained knowledge, examinations and research projects; all this done in an effective way to keep students motivated and generates a good experience in obtaining knowledge.

In our pedagogy our faculty also addresses the relevance and effectiveness of our curricula, the values, the visions on our education policy.

All of our degrees are licensed and recognised by the Lebanese Ministry of Education and Higher Education. ULF curricula framework includes general education requirements, core and elective courses, prerequisites, and graduation requirements in line with the Lebanese Higher Education Law.

ULF degrees information, rules and regulations are clear, published and communicated to students, faculty and staff.

ULF has an academic advising system in place that meet students' needs and this advising system always reviewed.

ULF pedagogy approach is based on the ECTS education system. Teachers distribute their course evaluation over several sections which include: class attendance and participation, home works, exams, case studies (in some courses) and research projects; these evaluations as well as description of the course objectives, contents, etc. are well defined in the course syllabus given to students at the beginning of each course. Students are encouraged to work alone and in groups. Students who fail the final examinations are permitted to sit for a make-up exam and those unhappy with their final marks can petition for an appeal and clarifications. All degree programmes require final research project for graduation, where more than a faculty member will be involved in supervision and evaluation of work. Students will need to defend their final projects to the jury who issues final marks. Research project processes are clear, well defined and published to students.

ULF academic council is responsible for procedures and policies related to academic decision making and ensuring faculty participations. Students are also engaged in evaluating courses they have taken as well as instructors through the student faculty evaluation at the end of each course.

ULF academic programmes are sustained, reviewed and updated through the process at the academic council which is also involved in evaluating programmes and their outcomes. The academic council is responsible for approval of the design of new programmes before confirmation by the University council.

ULF has a clear and published policy regarding admissions credit transfer, attendance, examinations, etc.

ULF have an ongoing mechanism for systematically evaluating students' learning outcome achievements and link the impact of faculty staff research on their teaching content and practices.

Our Didactic concept, therefore, includes:

1. Comprehensive syllabi for our taught courses to include teaching and learning objectives and outcomes.

2. Prepared lectures (lesson plans).

3. Continuous assessment (home works).

4. Case study analysis (where possible).

5. Debates (where possible).

6. Presentations by students (where possible)

7. Laboratory work to apply concepts (Science and Engineering Courses)

6. Written Examinations (represents a maximum of 40%, subject to the nature of the course taught and after the approval of the concerned Dean, and the remaining grades are distributed on attendance & participation, home works, cases studies, lab. work and other activities. This is part of our continuous assessment policy we adopt at the University).

7. Supervised full internship for our students in the workplace (to help our students bring the theories of the classroom to the realities of the market place).

8. Supervised Senior Research Project for Undergraduates students and Theses for our Master Students (a graduation requirement).

ULF encourages faculty members to deliver a two-ways hands on teaching and learning approach in their classes. Faculty members are encouraged to give students opportunities to interact in class, expand learning by individual and group work outside the class. Class teaching are designed to engage students through lectures, application of theories to the realities of the work place through laboratory work, case students and research assignments. ULF faculty are guided through regular meeting in their respective faculties and general faculty meetings to observe the education system, teaching and learning as set by ECTS.

Examination concept

Written Final Examinations represents a maximum of 40% subject to the nature of the course taught and after the approval of the concerned Dean, of the Final Grade, the remaining grades are distributed on attendance & participation, home works, cases studies, lab. work and other activities. This is part of our continuous assessment policy we adopt at the University.

We use the examinations to assess students understanding and mastering of studied concepts.

Exams are per subject, per study semester and summer sessions.

Exams are comprehensive per subject unless the course instructor gave a mid-term examination, in this case the Final Exam can be from that point forward with some selection of pre-mid-term subjects.

Exams are applied after courses instructions has been completed and normally the examinations period extends for several weeks after the reading period.

Examinations is given from the courses syllabi, lectures, laboratory work and research assignments.

All Final Examinations must be approved, as courses syllabi, by the academic departments chairpersons; are collected and prepared 72 hours prior to the examinations; distributed, verified and validated on the examination dates; collected and returned to the concerned course instructor for marking (students names sealed and covered); final examinations corrections, marks delivered to the registrar's office 72 hours after the examinations; exams are field and archived for a minimum period of 3-7 years.

For Senior Research Projects (undergraduate) and Theses (graduate), student must submit hardcopies and sit for defense sessions in front of a Jury. Our webpage lists the processes for Senior Projects and Theses Procedures, Examinations, Presentations, Defense and Assessments.