Lebanese Engineering Programs Accreditation Commission

LEPAC

A Project Sponsored by the

European Commission

Education and Culture Tempus Program

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Abstract

The engineering students in Lebanon are earning their degrees through different Engineering Programs in the increasing number of Lebanese universities. Consequently, it is important that these programs as well as the way they are delivered are monitored as to their intrinsic quality, their compatibility with international standards and their response to National needs. Quality Higher Education in Lebanon was always an attraction for neighboring countries and it is in the national interest to foster this position in agreement with the National, Regional, and International development. For that objective, the "Lebanese Engineering Programs Accreditation Commission – LEPAC" was proposed.

The project LEPAC, financed by the EU Commission under TEMPUS program, aims at putting in place an accreditation system for engineering education in Lebanon. This system should be based on the International Standards and Procedures such as ABET and EUR-ACE.

LEPAC, a consortium of Lebanese and European Private and Public Institutions concerning engineering education, is official inauguration was January 2007 with an opening ceremony under the auspices of the Minister of Education and Higher Education. Ministry Officials, Presidents of the Order of Engineers, the EU TEMPUS representative in Lebanon, the Lebanese and European Project Partners, University Presidents, Vice-Presidents, Deans, and Professors were present. This ceremony was held in the premises of the UNESCO Regional Office in Beirut.

 LEPAC is to periodically assess engineering programs offered at universities operating in Lebanon and accredit those programs that meet established standards to ensure highest quality of engineering education. LEPAC major responsibilities are:

1. Define accreditation goals and objectives and processes for assessing them.

2. Assess engineering programs in the context of the specific program objectives and outcomes.
3. Provide feedback to institutions for improvement.
4. Renders accreditation decisions.
5. Identify to all stakeholders the programs that meet the set of standards and criteria.
6. Publish accreditation decision to constituencies.
7. Set, assess, and maintain policies and procedures.
8. Develop, assess, and maintain programs' criteria.
9. Form standing committees to manage details of all aspects of accreditation process.
10. Maintain the integrity of the accreditation process (team formation, timelines, etc.).
11. Act as liaison between institutions, government, and public.
12. Advise the Ministry of Higher Education on licensing new programs.

Summary

This document is composed of three parts:

Part I – gives a brief description of the project, Overview of the project, Project plan, Activities & Outcomes

Part II – presents LABE: Mission, Vision, Responsibilities, composition, Accreditation Policy & procedures, Accreditation Criteria

Part III – presents a Self-Study Report Template

Part I

Overview of the project

Project plan

Activities & Outcomes

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Part 1- Project Plan

Activities of the project & Outcomes

1. Background of the Project

1.1 Need for the project

- Necessity of recognition and accreditation of Engineering Programs (EPs) to unify the standards of the EPs offered in every country.

- Higher Education Institutions (HEI) in the Arab Region are relatively new, some Arab States have established a body concerned with accreditation.

- The Beirut Conference opened a new era of interest in quality assurance among the Higher Education community in the Arab States calling for the establishment of a Regional mechanism for quality assurance and accreditation under the auspices of the Association of the Arab Universities and calling to Member States of the region to establish similar mechanisms at the National level.

- In Lebanon, more than 140,000 students are enrolled in HEIs distributed over 40 private and Public HEIs that are licensed by the Lebanese Council of Ministers.

- Lebanon needs to establish a mechanism for accrediting and evaluating the HEIs. This Lebanese need goes along the same Tempus MEDA National Priorities for Lebanon.

1.2 Accreditation criteria:

Accreditation system must examine single EPs such that it:

- Satisfies standard prerequisites on the contents of the study program.

- Shows the capacity to produce completely qualified students, specifically through the definition of a series of cultural, technical and professional requirements that are projected over the entire work life.

- Provides complete documentation on the means used to achieve the training objectives.

- Ensures that the objectives are achieved.

1.3 Accreditation Board

Accreditation must be done by an Accreditation Board that:

- Approves detailed guidelines and operating procedures for accreditation.

- Oversees all operational arrangements and appoints evaluation panels.

- Receives evaluation reports on EPs and determines whether accreditation should be granted and on what conditions.

- Responds to any complaints concerning the accreditation process and to any proposals for change.

- Oversees the development and operation of accreditation and mutual recognition agreements with other countries.

- Fosters the dissemination of developments and best practices in engineering education.

2. Specific Project Objectives

Main Goal
The Main goal is to put in place an accreditation board for engineering education in Lebanon, namely the "Lebanese Accreditation Board for Engineering Education – LABEE". This board is based on International Standards and Procedures such as EUR–ACE

This goal can be achieved by understanding the World's status quo systems of licensing and accreditation of EPs and **producing** an appropriate legislating accreditation system to be **adopted by the Lebanese Ministry** of Higher Education.

Main objectives are:
- To establish an organizational structure and bylaws for the proposed LABEE
- To establish a draft of accreditation criteria
- To establish a draft of accreditation procedures
- To train Lebanese accreditation specialists
- To be a consultant to the Lebanese Ministry of HE and the Orders of Engineers for the equivalency of the international Engineering Degrees
- To identify and classify EPs.

3. The Steering Committee (Lebanese Partners)

Dr. Haissam ZIADE	Faculty of Engineering - Lebanese University – **Project Coordinator**
Dr. Ahmad JAMMAL	Director General of Higher Education - Ministry of

	Higher Education in Lebanon
Mr. Abdul-Monhem Alameddine represented by Dr Nahed Ghazal	President – Order of Engineers in North-Lebanon
Mr. Samir DOUMIT represented by Dr Charbel El Kfouri	President – Order of Engineers in Beirut
Dr. Amer HELWANI	Consultant to the Minister of Higher Education – Lebanon
Dr. Mohamad KHALDI	Faculty of Engineering - University of Balamand – Lebanon
Dr. Sobhi ABOU CHAHINE	Faculty of Engineering – Beirut Arab University – Lebanon
Dr. Ahmad SMAILI	Chairman of the School of Engineering - Hariri Canadian University – Lebanon

4. The Steering Committee (European Partners)

Dr. Guiliano AUGUSTI	Faculty of Engineering - Universita La Sapienza – Italy - **Grant Coordinator**
Mr. Philippe WAUTERS	European Federation of National Engineering Associations FEANI – Brussels - **Grant Holder**
Dr. Dieter Weichert	Director of the Institute of General Mechanics - Aachen University of Technology – Germany - **President of the Technical Committee**
Mr Jean-Francois COMBE & Dr. Bernard REMAUD	Commission des titres d'ingénieurs (CTI) – France - **Vice-President of the Technical Committee**
Dr. Claudio BORRI	European Society for Engineering Education (SEFI) – Brussels and University of Florence - Italy
Dr. Iring WASSER	German Accreditation Agency for Study Programs in Engineering ASIIN - Germany

5. Project Official Dates

LEPAC's official starting date: **October 14, 2006**
LEPAC's official inauguration was January 2007 with an opening ceremony in UNESCO Regional Office in Beirut under the auspices of the Minister of Education and Higher Education. Ministry Officials, Presidents of the Order of Engineers, the EU TEMPUS representative in Lebanon, the Lebanese and European Project Partners, University Presidents, Vice–Presidents, Deans, and Professors were present.
LEPAC's official end date : **April 14, 2008**

6. The Milestones of the Project

Official Meetings

Activities	Day
Steering Committee I in Beirut	January 11, 2007
Seminar I in Beirut	**February 26–27, 2007**
Seminar II in Beirut	March 15–16, 2007
Steering Committee II in Paris	May 16, 2007
Technical Committee I in Beirut	June 18, 2007
Technical Committee II in Beirut	September 18,2007
Steering Committee III in Brussels	October 31, 2007
	January 7–12, 2008
Training Visit in CTI France	February 12, 2008
Technical Committee III in Beirut	April 7, 2008
Final Meeting in Beirut	

Lebanese SC partners meetings

Activities	Day
Lebanese Steering Committee Meeting 1	November 2, 2006
Lebanese Steering Committee Meeting 2	December 1, 2007
Lebanese Steering Committee Meeting 3	March 26, 2007
Lebanese Steering Committee Meeting 4	April 10, 2007
Lebanese Steering Committee Meeting 5	April 23, 2007
Lebanese Steering Committee Meeting 6	May 7, 2007
Lebanese Steering Committee Meeting 7	June 11, 2007
Lebanese Steering Committee Meeting 8	August 16, 2007
Lebanese Steering Committee Meeting 9	September 11, 2007
Lebanese Steering Committee Meeting 10	October 18, 2007
Lebanese Steering Committee Meeting 11	November 15, 2007
Lebanese Steering Committee Meeting 12	December 31, 2007
Lebanese Steering Committee Meeting 13	February 2, 2008
Lebanese Steering Committee Meeting 14	March 13, 2008
Lebanese Steering Committee Meeting 15	March 27, 2008

7. Project Outcome 1 - Seminar I

Six European experts have present Engineering Programs Accreditation related issues at the first Seminar (held in Beirut on February 26–27, 2007) that has cover the following topics:

    Administrative Structures
    Functioning Committees
    Accreditation Procedures
    Financial Issues
    Case Studies

Seminar I (day 2)

Topic	Presenter	Country	Affiliation
Engineering Education Trends in Europe in a Global Context	C Borri	Italy	University of Florence - Italy
Engineering Education Status in Relation to the Profession	Ph Wauters	Belgium	FEANI -Belgium
Quality Assurance and Enhancement of Engineering Education	J-M Siwak J-F Combe	France	The Commission des Titres d'Ingénieurs – CTI
The EUR-ACE Proposed Accreditation and Labelling System and its Framework Standards	G Augusti	Italy	Università La Sapienza - Italy

Seminar I (day 2)

Topic	Presenter	Country	Affiliation
French Accreditation Systems – Basic Elements	J-M Siwak J-F Combe	France	The Commission des Titres d'Ingénieurs – CTI
French Accreditation System – Financial Issues and Administrative Structures	J-M Siwak J-F Combe	France	The Commission des Titres d'Ingénieurs – CTI
German Accreditation – Basic Elements	I Wasser	Germany	German Accreditation Agency for Study Programs in Engineering ASIIN
German Accreditation System – Financial Issues, Administrative Structures, and Case Study	I Wasser	Germany	German Accreditation Agency for Study Programs in Engineering ASIIN

Seminar I attendees
All private and public institutions that offer engineering programs listed as
follows:

American University at Beirut (AUB)
Beirut Arab University (BAU)
Hariri Canadian University (HCU)
Islamic University of Lebanon (IUL)
Lebanese American University (LAU)
Lebanese International University (LIU)
Lebanese University (LU)
Manar University of Tripoli (MUT)
Notre Dame University (NDU)
Saint Joseph University (USJ)
Université Antonine (UPA)

Université Saint-Esprit de Kaslik (USEK)
University of Balamand (UOB)

8. Project Outcome 2 – Seminar 2

Five European and two Lebanese experts has present Engineering Programs
Accreditation related issues at the second Seminar (held in Beirut on March 15–
16, 2007) that has cover the following topics:

Engineering Education Standards
Accreditation Criteria
Assessment and Quality Assurance
Engineering Education Trends in Europe
Case Studies

Seminar II (day 1)

Topic	Presenter	Country	Affiliation
Evolution of the Higher Education in Lebanon	A Jammal	Lebanon	Ministry of Higher Education Lebanon
Structure de Projet de Self – Evaluation	A H Husseini	Lebanon	Lebanese University
Evaluation/Accreditation of Portuguese Engineering Programs	J De Silva	Portugal	Escola Superior de Tecnologia – EST
Engineering Program Accreditation in Ireland	R Hayes	Ireland	Dublin Institute of Technology – DIT

Seminar II (day 2)

Topic	Presenter	Country	Affiliation
Accreditation of Engineering Programs in France: Case Study I	R P Martin	France	The Commission des Titres d'Ingénieurs – CTI
Accreditation of Engineering Programs in France: Case Study II	B Remaud	France	The Commission des Titres d'Ingénieurs – CTI
Summary and Conclusions of Seminars I and II	D Weichert	Germany	RWTH – Aachen University of Technology – Germany

Seminar II attendees

All private and public institutions that offer engineering programs, have participated to seminar II as in seminar I.

## 9. Project Outcome 3 - Technical Committee activities

Technical Committee: The participants to seminar I and II, who are the representatives of the private and public higher education institutions, were the core of TC.
Dr. Weichert of RWTH and Mr. Remaud (Mr Combe) of CTI were the president and vice-president of the TC, respectively. Dr. JAMMAL (DGHE in Lebanon) was the local coordinator of the TC. The TC formed two subcommittees:
  • Subcommittee I Structure and organization of LABE
  • Subcommittee II Procedures of accreditation and criteria of evaluation.
The primary task of the TC is to produce the necessary organizational, procedural, and technical documents for LABE.

Technical Committee Organization
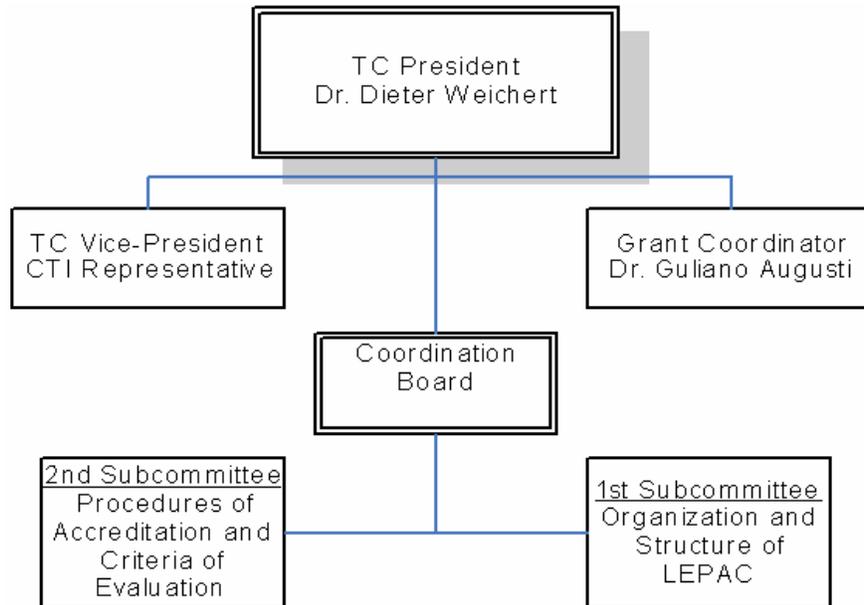
Technical Committee Members

Local Coordinator: Ahmad JAMMAL (DGHE)
Coordinators:
    Sobhi Abou Chahine (BAU), for subcommittee I
    Ahmad Smaili (HCU), for Subcommittee II

Subcommitte I members: Ahmad Smaili (HCU), Antoine Hreiche, Chadi
Hosari Chaiban Nasr (LU), Chawki Diab (CNAM), Fadel Moukaled (AUB), Iyad
Ouaiss (LAU), Karim Nasr (UOB), Mohamad Khaldi (UOB), Mohamad Khalil
(IUL), Mohammad Nasri (MUT), Moustafa Hamad (NDU), Pierre Geoden (UPA),
Sawsan Saridar (BAU), Sylvie Devigne (CNAM)

Subcommittee II members: Abdul Hassan Husseini (LU), Abdul Menhem
Koubaissi (IUL), Abdul-Majid Abdul Ghani (LIU), Ahmad Jammal (DGHE),
Ahmad Smaili (HCU), Amer Helwani (MEHE, LU), Charbel El Kfouri (Order of
Engineers – Beirut), Dani Mezher (USG), Elias Nassar (NDU), Mazen Tabbarah
(LAU), Mohamad Taha (HCU), Nazed Ghazal (Order of Engineers – Tripoli),
Nuhad Dagher (AUB), Pierre Gedeon (UPA), Sobhi Abou Chahine (BAU), Walid
Kamali (MUT)

Technical Committee Documents Outcomes
   • **Lebanese Accreditation Board for Engineering Education (LABEE):**
     Mission, Vision, Responsibilities, Composition, LABEs Membership,
     Nominations, Selection, Members for the first Board, Membership Period,
     Mandate, Funding
   • **Accreditation Policy and Procedures**: Licensing Policy, Operation
     Eligibility Policy, Accreditation Policy, *Institutional Eligibility for*

Accreditation, Program Eligibility for Accreditation, Accreditation Procedures
- **Accreditation Criteria**: Program, Students, Faculty Members, Facilities, Institutional Support, Program Specific Criteria
- **Accreditation of Established Programs**: Full Accreditation, Conditional Accreditation, *Major Weaknesses and Severe Weaknesses,* No Accreditation, Accrediting New Programs
- **Experts Guidelines and Criteria**: Nominations, Selection, Formation of the Visiting Teams, Accreditation Appeals Board
- **Accreditation Process Guidelines**
- **Preparation for the On-Site Accreditation Visit**
- **Self Study Report (SSR) example**
- **Some useful Appendix**

10. Project Outcome 4 - Training Visit

Twelve TC members were chosen for the training visit that was hosted by CTI in France. The aim of the training visit is to observe closely an accreditation process.

The names of the Lebanese experts that they went to France for the Training Visit organized by CTI are: Dr. Ahmad Jammal (MEHE), Dr. Amer Helwani (MEHE), Dr. Haissam Ziade (LU), Dr. Mohamad Khaldi (UOB), Dr. Sobhi Abu Chahine (BAU), Dr. Ahmad Smaili (HCU), Dr. Nahed Ghazal (Order of Engineer), Dr. Charbel El Kfouri (Order of Engineer), Dr. Pierre Gedeon (UPA), Dr. Dani Mezher (USJ), Dr. Nouhad Dagher (AUB), Dr. Mohamad Khalil (IUL), Dr. Chaouki Diab (CNAM)

Training Visit Program
Monday, January 7 14.00 – 17.00 CTI presentation

Tuesday, January 8 9:00 – 17:00
The participants are split in 2 groups; they visit 2 "Grandes Ecoles" who have been evaluated by CTI ; the main objective is to study the evaluation process viewed from the institutions
      Group 1 attends as observers the plenary meeting of CTI
      Group 2 visits SupMeca (public institution), 3 rue Fernand Hainaut,
      93407 Saint-Ouen

Wednesday, January 9 9:00 – 17:00
      Group 2 attends as observers the plenary meeting of CTI
      Group 1 visits EPF (private institution), 3 bis rue Lakanal 92330 SCEAUX

Thursday, January 10 9:00 – 15:00   Workshop at CTI
      Case studies : files provided by institutions, visiting experts' reports, final
conclusion by CTI
      CTI auto-evaluation report and external review report for ENQA
      Debriefing and conclusions
      15:00 – 17.00 Meeting with CDEFI, Conférence des Directeurs d'Ecoles
      Francaises d'Ingenieurs

11. Conclusions

The proposed LABEE objectives and responsibilities are the following:

Objectives:
LABEE is to periodically assess engineering programs offered at universities operating in Lebanon and accredit those programs that meet established standards to ensure highest quality of engineering education.

LABEE major responsibilities are:
- Define accreditation goals and objectives and processes for assessing them.
- Assess engineering programs in the context of the specific program objectives and outcomes.
- Provide feedback to institutions for improvement.
- Renders accreditation decisions.
- Identify to all stakeholders the programs that meet the set of standards and criteria.
- Publish accreditation decision to constituencies.
- Set, assess, and maintain policies and procedures.
- Develop, assess, and maintain programs' criteria.
- Form standing committees to manage details of all aspects of accreditation process.
- Maintain the integrity of the accreditation process (team formation, timelines, etc.).
- Act as liaison between institutions, government, and public.
- Advise the Ministry of Higher Education on licensing new programs.

Part II

LABE: Mission, Vision, Responsibility, composition

Accreditation Policy & procedures

Accreditation Criteria

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I.   Lebanese Accreditation Board for Engineering (LABE)

Mission

LABE's mission is to periodically assess engineering programs offered at universities operating in Lebanon and accredit those programs that meet established standards to ensure highest quality of engineering education, relevancy to the job market, and employability of graduates.

Vision

LABE's vision is to see that every engineering program offered at any University in Lebanon is able to provide, maintain and sustain quality engineering education that is congruent with community interests and societal needs, integrate and harness the use of modern technologies, have strategies in place to face the continuously evolving challenges of engineering education, harness cooperation with outside engineering accreditation boards, and being able to disseminate the culture of quality assurance and accreditation in the Lebanese engineering profession.

Responsibilities

1. Define accreditation goals and objectives and processes for assessing them.
2. Assess engineering programs in the context of the specific program objectives and outcomes.
3. Provide feedback to institutions for improvement.
4. Renders accreditation decisions.
5. Identify to all stakeholders the programs that meet the set of standards and criteria.
6. Publish accreditation decision to constituencies.
7. Set, assess, and maintain policies and procedures.
8. Develop, assess, and maintain programs' criteria.
9. Form standing committees to manage details of all aspects of accreditation process.

10. Maintain the integrity of the accreditation process (team formation, timelines, etc.).
11. Act as liaison between institutions, government, and public.
12. Advise the Ministry of Higher Education on licensing new programs.

Composition

The accreditation board is a composite of the major stakeholders of engineering education. It is composed of members that represent the following entities and institutions:

Entities and Institutions	Number of Members
Ministry of Higher Education	1
Other Concerned Ministries (Public Works, Agriculture)	2
Order of Engineers	2

Higher Education Institutions:
 	
    Lebanese University   2
 	
    Private Institutions   3
assuming rotation of membership
	5

Industry Representative	2

Consultants without voting right:
 	
    International Advisor
    1 (selected by LABE)
 	
    Regional or UNESCO Representative   1 (nominated)
	2

The above board members will elect from among them to serve for a period of three years the following:

1. **President**: Coordinates the functions of all committees, presides the meetings, links between the board and other constituencies, ensures that LABEs standards are met.
2. **Vice President**: Acts as president whenever the president is not available.
3. **Secretary**: Records minutes, prepares the agenda in consultation with the president, help in drafting the annual report.
4. **Treasurer**: Keeps record of all funds, manages funds for accreditation teams, solicit support from agencies.

In addition to these Officers, the board appoints a number of coordinators to fulfill the following roles:

1. Program Accreditation Coordinator: manages the interaction between the team and the institution and prepare the timeline.
2. Policies, Procedures, Strategies, and Orientation Coordinator.
3. Visiting Teams Coordinators.

LABEs Membership

LABEs members serve on a strictly voluntary basis.

Nominations

Members of LABE's stakeholders submit nominations of potential board members who are deemed to best fit the selection criteria according to the following format:

	Number of Candidates
Each institution of Higher Education that offer engineering programs nominates	1
Industry Association nominates	4
Ministry of Higher Education nominates	1
Ministry of Public Works nominates	1
Ministry of Agriculture nominates	1
Order of Engineers – Beirut nominates	2

Order of Engineers – Tripoli nominates	2

Selection

1. Selection from the nominees list will be done according to the following criteria.
   a. Have ample experience in engineering education and/or professional practice.
   b. Have commitment to enhancing engineering education standards.
   c. Have participated in activities related to accreditation of engineering programs.
2. Selection of members must ensure that membership on the board is rotational among institutions of Higher Education.

Members for the first Board

Members to serve on the first Board will be selected by the Steering Committee of LEPAC in consultation with the Ministry of Higher Education and the Orders of Engineers. The first board runs LABE for two years. Thereafter, half of the initial board would continue to serve and the other half is selected from the nominees. The half to remain is decided by LABE and constitutes 1 member from the Order of Engineers, 1 member from industry, 3 members from institutions of Higher Education, and 1 member from the ministries.

Membership Period

Membership on LABE should be for a period of 3 years. Membership could be renewed for an additional one three years term only. In case a vacancy on the board occurs, the member that will fill the vacancy shall only serve for the duration of the term. No more than half of the membership is renewed at one time to ensure continuity.

Mandate

1. LABE is mandated by the Council of Ministers.
2. LABE operates with complete autonomy within the context of its rules and regulations.
3. The board has the sole responsibility to render the accreditation decisions.
4. The decisions of the Ministry of Higher Education for Equivalence Committee, Engineering Committee, and Technical Committee conform to LABE's recommendations.
5. The Ministry of Public Works, the Ministry of Agriculture and the Orders of Engineers accept LABE's recommendations and conform to it when attaining permission of practicing the engineering profession.

Funding

LABE operating funds (Appendix I: Required Resources) come from the following sources. The Ministry of Higher Education covers roughly 50 % of

LABEs operating budget. The balance of the required budget shall come from the following sources:

1. Institutions seeking accreditation will pay an accreditation fee of $ 3000 for each program to be accredited.
2. Universities offering engineering programs shall be charged an annual maintenance fee of $ 500.
3. Annual support from the Orders of Engineers.
4. Annual support from the Industrial Association.
5. Other sources that LABE seeks.

II. Accreditation Policy and Procedures

Licensing Policy

The program must meet the criteria set by LABE (criteria issued by the Ministry of Higher Education's decision conforms to LABE's recommendation).

Operation Eligibility Policy

A program to be eligible must satisfy the following conditions:

1. Evidence that the initiation of the program's requirements is met during a visit by LABE's expert.
2. Continuous assessment and audit for all years of study of the program.
3. According to assessment result, programs are eligible to be accredited for a full accreditation cycle of at most 6 years.

Accreditation Policy

Institutional Eligibility for Accreditation

A necessary condition to pursue accreditation of a program is that the institution in which the program is offered meets the following criteria:

1. Have an operating license from the Ministry of Higher Education.
2. Meets all standards and criteria established by the Ministry of Higher Education (decree 9274 and Higher Education Law).
3. Has been in operation for at least three years.

Program Eligibility for Accreditation

A program is eligible for accreditation if it satisfies the following minimum requirements:

1. Licensed by the Ministry of Higher Education. Decision for licensing is based on the established standards and criteria.
2. Meets equivalency standards as required by the Ministry of Higher Education.

3. Has been in operation at least for at least 3 years after graduating the first class. Exception to this applies to a new program in which case probationary accreditation for three years may be granted after graduating the first class.
4. Meets the program criteria set by the LABE.
5. Offers a curriculum that satisfies by experience the stated outcomes.

Accreditation Procedures

Once accreditation eligibility is met the accreditation process (Figure 1.) is as follows:

1. Form a team (board members serve on accreditation teams)
2. Eligibility Assessment
3. Evaluate Self Study Report
4. On-site visit
5. Visit Report
6. Accreditation Action
7. Appeals – accepted only if there is evidence that decision is not based on merit or team did not have all the information needed to make a decision.
8. Public Release of Accreditation information
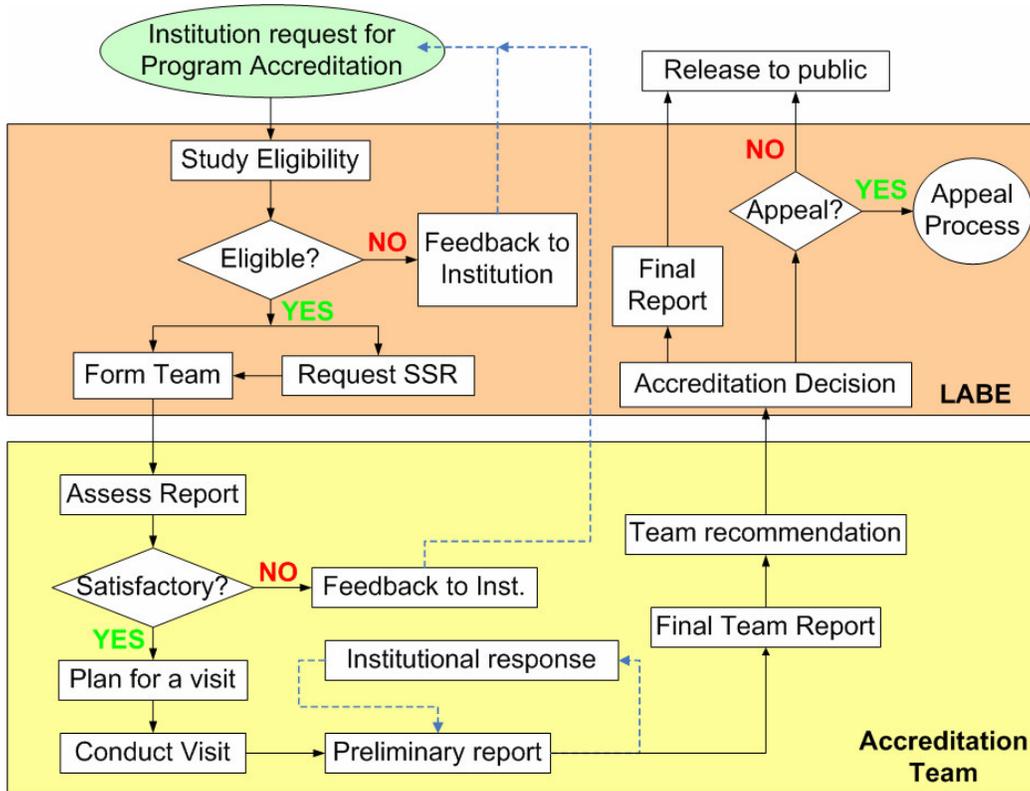
Figure 1. Accreditation Process

III. Accreditation Criteria

General Criteria

These criteria are drafted on the basis of internationally acceptable criteria such as ABET and EURACE.

1.   Program

Mission Statement

The program must articulate a mission statement that is in tune with the mission of the institution and form the basis for its objectives and educational outcomes.

Educational Objectives

The program must articulate and publish the educational objectives that relate to the career and professional accomplishments to be achieved by the graduates.

1. The objectives must conform to the current criteria and be congruent with the mission of the institution.
2. A process by which the stated objectives are continually assessed and updated to ensure conformity with the needs of the program's various constituencies (employers, etc.).
3. The program must have in place all the requirements and necessary support to ensure that the students' learning outcomes are achieved.
4. A process in place to assess the attainment of the objectives and to provide feedback used in developing and improving the learning outcomes that would in turn improve the level of graduates attaining the objectives.

Program Outcomes

The program must articulate a set of program outcomes that foster attainment of the program objectives. The outcomes define a set of

knowledge, skills, and attitudes expected of the graduates at the time of graduation. The program must enact a process that culminates in the formulation of the outcomes and an assessment process to measure the outcomes and the level they are attained. The program must publish the assessment results and enact a process to integrate them in improving the outcomes and objectives. The program must demonstrate that their graduates possess the skills that enable them to:

1. Embark on successful careers and internalize the spirit of life-long learning;
2. Integrate engineering fundamentals principles and concepts with contemporary technologies;
3. Apply modern experimental and computational tools;
4. Think critically and creatively, identify problems, evaluate new ideas, and advance innovative solutions;
5. Design and realize a system;
6. Harness strong professional and ethical standards.

Professional Component

1. The curriculum must be designed to include the necessary professional components that results in graduates attaining the program stated outcomes and objectives. The criteria do not specify the courses of the curriculum but rather the overall integrative experience that satisfies the mission, objectives and outcomes of the program and conform to the mission of the institution.
2. The curriculum must prepare students to perform in the practical world by requiring students to conduct research to heighten their level of understanding of technical issues that are not formally covered in the curriculum using scientifically based methods (including literature searches, design and execution of experiments, interpretation of data, and computer simulations) and to integrate knowledge and skills acquired in earlier course work in a major design experience (or final year project) that incorporate appropriate engineering standards and multiple realistic

constraints (economic; environmental; sustainability; manufacturability; ethical; health and safety; social; political, legal, and human resources).

3. The faculty members must assure that the curriculum devotes adequate attention and time to each component and must be able to justify the place of his/her subject in the program, its interconnection with other subjects and its role in forming professional component.

4. The program must have a practical training period spent outside the university with specific outcomes.

The program that fulfils the Professional Component tracks one of the following educational platforms[1]:

1. Programs offering Bachelor of Engineering (BEng) degree (5years)
2. Programs offering Diplome D'ingenieur degree (5years)
3. Program with a three-year Bachelor of Science (BS) followed by a two-year Master of Science (MS) degree

The Professional Component must conform to:

1. At least 15 % as University required general education or liberal arts courses which include humanities, social sciences, languages, business, law, economics, etc..
2. At least 25 % as College required basic sciences and mathematics.
3. At least 50 % of Program required related engineering courses, etc..

Assessment Process

Assessment is the key component of the accreditation process. The program must establish assessment processes and use the results for improvement. The program must publish the assessment results and enact a process to integrate them in improving the outcomes and objectives. Specifically the program must have in place:

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[1] Once commissioned, LABEs will establish a clear correspondence between the various platforms.

1. A process by which the stated objectives are continually assessed to ascertain the level to which they are attained and updated to ensure conformity with the needs of the program's various constituencies.

2. A process to assess the level of attaining the learning outcomes and to show how the assessment results are used to improve the program so that the outcomes are better attained.

2. Students

The quality of a program is ultimately measured by the quality of its graduates. To ensure quality graduates, the following students' criteria must be satisfied.

Quality of Admission and Transfer Policies

The program must demonstrate that proper admission policies are in place and that clear acceptance guidelines are implemented and posted to applicants. Furthermore, the program must clearly implement policies for accepting transfer students and accepting courses taken at other institutions.

Performance Monitoring and Evaluation

The program must have in place clear, fair, and continuous assessment criteria for students' performance (grading policies, probation and suspension rules, etc.). The assessment criteria must be communicated to students transparently.

Mentoring, Advising, and Counseling

The advising and counseling of students is the responsibility of the advisors assigned to the students. The role of the advisor is to monitor student's progress and provide prompt and tailored advice on curriculum, course selection, time management, development of essential competencies, and career plans. The program should promote communication between students and faculty/administration.

Student Life

The program must promote and sponsor the formation of professional, cultural, social, and athletic student organizations. The program must take into consideration students' input and recommendations on relevant program matters. Student alumni associations and the communication between students and alumni should be encouraged.

3. Faculty Members

The faculty members, including full timers, part timers, visiting professors and industrialists, are the heart of any educational program.. The faculty members must satisfy the rules and the regulations sanctioned by the Ministry of Higher Education in Lebanon. Additionally they must satisfy the following criteria:

1. The faculty must be of sufficient number and appropriate qualifications to accommodate the student population (Student-to-Faculty ratio as a rule is less than 20), course load, services to the department and institution and research.
2. Faculty members must have competencies and qualifications to cover all of the curricular areas of the programs. Faculty competencies may be judged by such factors as education, diversity of backgrounds, professional experience, research throughput, teaching effectiveness, ability to communicate, enthusiasm for developing more effective programs, level of scholarship, participation in professional societies, and licensure as Professional Engineers.
3. Faculty members must engage in scientific research related to their area of expertise to enrich their spirit and sharpen their attitudes and skills in instruction and relate subject taught to current trends and state of the art.
4. The faculty members must provide for the following:

   a. Accommodate adequate levels of student-faculty interaction, student advising and counseling, professional development, and supervise student projects and extracurricular activities.

b. Interact with industrial and professional practitioners and prospective employers

c. Engage a continuous professional development

d. Demonstrate sufficient authority to ensure the proper guidance of the program and to develop and implement processes for the evaluation, assessment, and continuing improvement of the program, its educational objectives and outcomes.

4. Facilities

The program must:

1. Demonstrate the availability and adequacy of equipment, laboratories, and classroom space and show how they contribute to the achievement of program objectives and outcomes.
2. Ensure that the facilities are equipped with modern engineering tools which are consistent with the needs of industry.
3. Demonstrate that students have hands-on experiences to support learning and acquisition of skills.
4. Provide students with sufficient resources for independent study and research.
5. Provide and continuously upgrade the IT infrastructure to support the learning experiences of students, to further the scholarly activities of faculty members, and to ensure accomplishment of program's educational objectives.
6. Provide a dedicated physical library resources as well as on-line databases to support the scholarly activities of students and faculty and continuously improve achievement of program outcomes.
7. Receive institutional support to update and improve its facilities.

5. Institutional Support

The program must provide evidence that the institution has strong commitment to the quality, success, and sustainability of the engineering program. The evidence must show that the institution is:

1. Pro-actively involved in the continuous improvement of the program,

2. Providing leadership to ensure that the program meets stated program objectives and learning outcomes that are in line with the mission of the institution,

3. Providing adequate and continuous financial resources to:

   a. Support the recruitment and retention of quality faculty in appropriate quantity as explained in the criterion Faculty Members.

   b. Support professional and academic development of faculty: attending workshops, conferences, etc.

   c. Acquire and maintain adequate learning facilities: IT infrastructure, multimedia support, adequate classroom environment, library, etc.

   d. Acquire, maintain, and operate new equipment, etc.

   e. Allocate adequate budget for research activities.

2. Maintaining a level of services that meets program's demands and operational requirements and supports adequate students' life (professional societies, extracurricular activities, competitions, etc.),

3. Helping students in career planning and placement. This could be achieved by:

   a. Creating an efficient contact link with local and regional industries to identify possible job opportunities and communicate them to students

   b. Organizing job fair on campus

   c. Organize seminars and invite alumni and experts to speak on related engineering and technology practices.

4. Providing for adequate support personnel to run the program. This includes secretarial support and technicians to maintain the labs and IT infrastructure.

Program Specific Criteria

The program must support the realization of a well-rounded engineer (Figure 2.) who is characterized by the three enabling pillars:

1. Core knowledge and technical skills;
2. Context and setting understanding in which engineering knowledge and skills are applied and practiced;
3. Attitudes and abilities (soft skills) to practice engineering effectively.

Core knowledge and technical skills include mathematics, basic sciences, relevant engineering topics, modern hands-on skills, and integration of various skills in a major design experience to realize a system. Understanding the context include coverage of social sciences, humanities, and ramifications of engineering on culture and the environment. In this regard the program is strongly encouraged to establish a strong link with local and regional industries to get their input on program objectives and outcomes, collaborate on projects of mutual interest, and invite practicing engineers to give seminars on contemporary engineering areas, and teach practical courses. Attitudes and abilities (soft skills) relate to communication skills, professional responsibilities that allow engineers to put their knowledge and skills for the betterment of community.
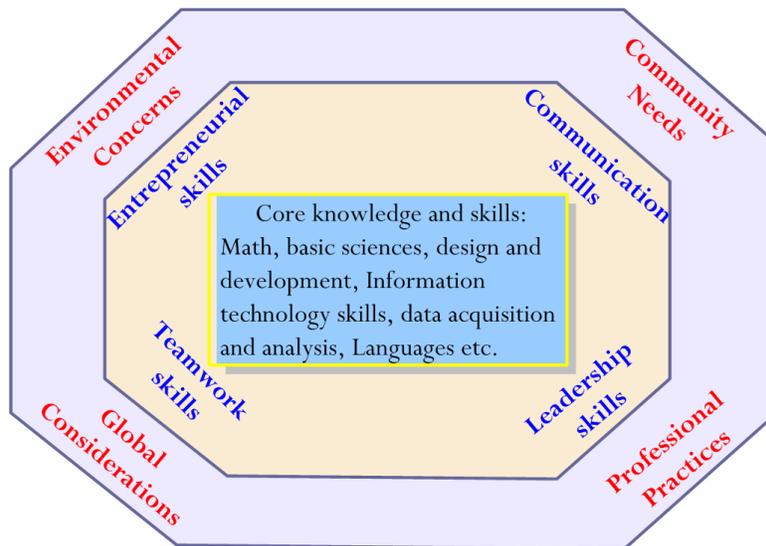
Figure 2. Conceptual Nucleus and Surroundings of an Engineering Student

IV. Accreditation of Established Programs

Accreditation is rendered by LABE on the basis of the recommendation of the visiting team. Based on the team's assessment accreditation is awarded according to following criteria:

Full Accreditation

A full accreditation cycle of six years is granted to a program in complete compliance with the accreditation criteria. In case of Minor Weaknesses[2] and/or Minor Deficiencies exist; the institution must provide a report in two years detailing steps taken by the institution to remedy those deficiencies. If the report is not convincing, LABE may revoke the accreditation decision and recommend a new accreditation visit.

Conditional Accreditation

This category is accorded to programs that implement all criteria components but suffer from Major Weaknesses in implementing one or more of the criteria components. The program receives accreditation according to the severity of the weaknesses observed by the accreditation team.

Category I: Major Weaknesses

In case of Major Weaknesses the program is granted a Three-year accreditation period followed by a report detailing actions taken by the institution to remedy the weaknesses. The accreditation team carefully studies the report and makes one of the following recommendations:

1. Extend accreditation for the next two years followed by a new accreditation cycle. This action is recommended if the institution submits evidence that appropriate corrective measures have been taken to overcome the weaknesses indicated in the report.
2. Request a new visit to the institution to verify the report's assertions. This action is recommended if the accreditation team decides that the

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[2] Refer to Table 1. for definitions.

evidence submitted by the institution on the required corrective measures is not convincing and warrants verification.

3. Deny accreditation altogether if the institution fails to correct the weaknesses.

Category II: Severe Weaknesses

In case of Severe Weaknesses the program is granted a three-year accreditation period followed by a new visit. After the new visit the accreditation team makes one of the following recommendations:

1. Extend accreditation for the next three years followed by a new accreditation cycle. This action is recommended if the institution submits evidence that appropriate corrective measures have been taken to overcome the weaknesses and/or deficiencies indicated in the report.

2. Accord the program a conditional accreditation for two years if the accreditation team decides that the institution has taken required corrective measures to resolve the outstanding weaknesses and deficiencies but not to the level that warrants full accreditation to the extent of the full accreditation cycle.

3. Deny accreditation altogether if the institution fails to enact appropriate measures to resolve the weaknesses and deficiencies.

No Accreditation

This category is accorded to a program with Core Weaknesses and/or Core Deficiencies that require significant corrective actions to remedy them. The institution will be given one year to remedy the program's core weaknesses and deficiencies. The institution may request a visit anytime after all weaknesses and deficiencies are resolved. A visit is then conducted and the visiting team may recommend one of the following:

1. Grant the program full accreditation to the extent of the current accreditation cycle.

2. Grant the program conditional accreditation for an appropriate period.

3. Deny accreditation.

Tabe 1. Definitions for Weaknesses and Deficiencies

Minor Weaknesses	Involve weakness in implementing one of the criteria but does not the program's integrity and one that could be resolved with minor resources.
Major Weaknesses	Involves weaknesses that degrades the program's integrity but could be remedied by reasonable measures.
Severe Weaknesses	Involves weaknesses in implementing one or more components of the criteria but needs major resources to remedy.
Core Weaknesses	Involves weaknesses in implementing more than one component of the criteria rendering the program noncompliant and needs a major overhaul.
Core Deficiencies	Involves programs that ignore one or more of the criteria components completely.

Accrediting New Programs

A newly established program may be accredited subject to the following conditions.

1. LABE has recommended licensing the program by the Ministry of Higher Education.
2. LABE team conducts an audit visit before the first graduating class to assess the program and provide feedback to satisfy the accreditation criteria.
3. An accreditation visit is conducted and decision to accredit for three years is granted provided that the program had implemented recommendations made after the audit visit.

V. Experts Guidelines and Criteria

Expert pool shall consist of persons who have established records in a related engineering field and are committed to volunteer their time and effort to achieve successful accreditation process.

Academics

One of LABE's stakeholders shall make formal recommendations on potential academic Expert. The selection of an academic to serve as an expert is based on evaluating his/her application on the following components:

1. Has a Ph.D. in an engineering field.
2. Has teaching experience of at least 10 years in his/her field.
3. Has experience in academic administration.
4. Has an established research and publication record.
5. Has a strong commitment to quality education.
6. Has participated in accreditation/quality related activities.
7. Is a member of the syndicate and/or at least one international professional society.

Industrial Experts

One of LABE's stakeholders shall make formal recommendations on potential industrial Expert. The selection of an industrialist to serve as an expert is based on evaluating his/her application on the following components:

1. Has a degree in an engineering field.
2. Has an industrial experience of at least 15 years out of which at least 2 years in a management position.
3. Has a proven record that shows interest, commitment, and active participation in programs devised to enhance engineering education.
4. Is a member of the syndicate and at least one international professional society.

Nominations

Any member of LABE's constituencies may nominate anyone (including international expert) who is deemed to satisfy the expert criteria. Nomination packet must include a resume of the candidate, two letters of references, and a brief personal statement that highlights the person's philosophy towards accreditation.

Selection

LABE shall form a committee to study the nominations. The committee makes recommendations and provides data for the basis of the recommendation. LABE renders the final decision.

Formation of the Visiting Teams

A carefully selected accreditation team is formed to assess the program's strengths and weaknesses and verify its compliance with the accreditation criteria. The team shall study the self-study report, conduct an on-site visit to the institution offering the program in question, write a report and make appropriate recommendation. The accreditation team shall consist of the following members:

1. A chairperson shall be a member of LABE.
2. Two program evaluators selected from the expert pool whose expertise is congruent with the targeted program. One member must be an academic expert. Both members must have the skills and experience that enable them to assess the quality of the program and its learning outcomes.
3. One member will be selected for each additional program in case multiple programs are to be accredited at the same time.
4. Team members must not have any conflict of interest with the program being accredited.

Accreditation Appeals Board

The The Accreditation Appeals Committee shall consist of the President of LABE, the Chairman of the Accreditation Appeals Committee, and the members

of the corresponding accreditation team. If necessary, the Accreditation Appeals Committee may appoint other members with experience in the accreditation process. Any expenses incurred shall be borne by the institution making the appeal. The decision of the Accreditation Appeals Committee shall be final.

Appeal process

An institution may appeal LABE\s accreditation decision. A motion for appeal must be submitted in writing to the LABE president within 4 weeks after receiving the accreditation decision. Appeal motion must clearly state the grounds for the appeal and accompanied by supporting appeal documents. If necessary, LABE may appoint a Special Appeal Committee, comprised of members who are experienced in the accreditation process, to study the appeal file. The decision of the appeal process shall be forwarded to the institution within 3 months from the receipt of the appeal request. The decision of the Special Appeal Committee shall be final. Any expenses incurred in the appeal process shall be borne by the appealing institution.

VI. Accreditation Process Guidelines

The accreditation process is a major undertaking that requires the collaborative effort of all involved in the program: administrators, faculty, staff and students. Each group has an important role to play in ensuring that the program is in compliance with the general and specific accreditation criteria. It is an exercise in which strong leadership, commitment, and teamwork come to bear.

Requirements for the Accreditation Process

1. The institution must have an established record of stability, an institutional strategic plan, bylaws, governance, and an organizational hierarchy and control mechanism of the program's operation, quality, and sustainability.
2. The program must have developed

   a. A mission and vision statements.
   b. A properly established strategic plan with clear strategic actions.
   c. A set of carefully articulated educational objectives.
   d. A set of learning outcomes for the graduates.
   e. A well curriculum that efficiently integrates the professional components

3. The program must have developed and enacted processes to assess the educational objectives and learning outcomes.
4. The program must have carefully prepared the self study report (SSR) that accurately reflects the reality of the program.

VII. Preparation for the On-Site Accreditation Visit

Application for Accreditation

The Institution must submit to LABE a formal and complete application package before an accreditation visit can be scheduled. The application package should include a formal letter, an Application Form for each program to be accredited, and a complete Self Study Report. In case the application package is not complete, LABE requests and must receive the additional information within three months, otherwise the application will be considered withdrawn. For a program that has been accredited, the institution should apply for re-accreditation at least **6 months** before the expiry date of the current accreditation cycle.

Activities of the Accreditation Team

Once the application package is complete, LABE forms an accreditation team from the experts' pool on the basis of the programs to be visited and in compliance with Accreditation Team Selection Criteria. The Accreditation Team will assess the Program Objectives and Outcomes as well as carry out an evaluation based on all the accreditation Criteria. The assessment includes the auditing of documents submitted by the institution. The Accreditation Team chair and Accreditation Team members, either together or separately, should prepare a list of questions for each section of the criteria to be certain that all aspects of the criteria have been addressed. If the institution does not provide sufficient information, the LABE Secretariat should be notified and asked to request the additional information from the institution.

Scheduling of a Visit

A two-day accreditation visit is arranged and coordinated by the LABE Accreditation Coordinator on an appropriate date suitable to both the Accreditation Team and the institution. The visit should be held promptly after the appointment of the Accreditation Team. It is important that as far as possible, the agreed dates of visit are adhered to.

Preparation of the Visit Agenda

The program administrator, in consultation with LABEs Accreditation Coordinator, prepares and formalizes the two-day visit agenda for the visiting team. A typical schedule of the visit is given in Appendix II. Once the accreditation visit is planned, the institution must compile and organize all supporting material for the visiting team.

On-Site Accreditation Visit

The visit schedule should allow time for group discussion among all Accreditation Team members for preliminary feedback and discussion of issues with:

1. the program administrators.
2. Institution's academic officer.
3. Staff members.
4. Students.
5. External stakeholders such as alumni, employers, and industry advisor.

The visiting team shall carefully examine all relevant material which includes:

1. Department and university bulletins.
2. Organizational structure, institutional governance, and operating procedures of the program.
3. Educational programs offered and degrees conferred.
4. Maturity and stability of the institution and of the individual educational programs.
5. Basis and requirements for admission of students.
6. Number of students enrolled and retention and graduation rates in either the college or division as a whole and in the individual educational programs.
7. Teaching staff and teaching loads.
8. Labs, library, students work area, and other supporting Physical facilities (parking, healthy food services, courts, green areas) and institutional resources in support of the program.

9. Finances – investments, expenditures, sources of income.
10. Curricular content.
11. Dossiers for each course in the curriculum. The dossier must include course syllabus, handouts, textbook used, and samples of students work collected over the last two years representing the best, average, and worst.
12. Records of employments of graduates.
13. Students' support services.
14. Assessment of students work.
15. Disciplinary rules and regulations.

On-Site Report

At the end of the on-site visit, the visiting team prepares a preliminary draft report of each program evaluated and submits it to the institution. A draft preliminary report should articulate statements about:

	Examples
Facts	The program has four full-time faculty members and x part-time faculty members dedicated to carry out the mission of the program.
Compliance	The curriculum satisfies the professional component criteria.
Weaknesses	There is ample evidence that the program does not provide adequate support to the laboratory experience and remedial actions are necessary.
Deficiencies	There is strong evidence that the program does not offer any support to students' placement after graduation.
Observations	The lab facilities and not utilized in the most effective way.

The visiting team arranges for an exit interview with he institutional chief executive officer and other personnel requested by the team and discuss the draft statement and provide feedback about the team's observations of factual findings of the program evaluated.

Post-Accreditation Visit

The institution has 7 calendar days following the visit to provide corrections to the statements of facts, otherwise the factual findings are assumed to be correct. The visiting team prepares and submits to LABE accreditation coordinator a preliminary written report about the factual findings and recommendations of the team. LABE accreditation coordinator then edits the report and transmits it to the institution for review. The final statement is then submitted to LABEs board for final decision during the annual LABEs board meeting.

Appendix I: Required Resources

LABE is a non profit organization; the budget needed to accredit a program is estimated at $ 3,000. This estimated budget involves the following man-hour requirements:

24 Hours (3 peoples in a day) × 2 (days for a visit) + 20 Hours time to write the report = 68 mh

The $ 3,000/program budget covers travel expenses, per diem, office and secretarial support, and other related costs. This budget does not cover all expenses and Higher Education Institutions to which the team members belong should provide support in terms of release time and associated benefits.

If there are *ep* (engineering programs) offered at Universities in Lebanon and assuming that 20 % are accredited per year, consequently the budget that is required to carry out LABE's mission is calculated as follows:

0.2 × 3,000 × ep = 600 × ep

Appendix II: Typical Accreditation Visit Schedule

Pre Accreditation Visit

A day before the accreditation visit, the Accreditation Team chair and Accreditation Team members should hold a further meeting to finalize their findings and other issues related to the institutional program to be evaluated. It is also important to review the questions and concerns that they have developed. At this meeting, the Accreditation Team chair and Accreditation Team members should discuss the LABE evaluation criteria and how they apply to the program being evaluated.

The discussion should focus of whether or not the following program (and other) components are adequate:

1. Program objectives and specification of learning outcomes.
2. Development, review and attainment monitoring of graduate outcomes are informed by industry stakeholders.
3. Outcome specification drives a top-down educational design process.
4. Academic curriculum reflects a professional engineering program, and whether it satisfies the criteria completely.
5. Whether the learning outcomes and assessment measures within courses systematically map to track delivery of the targeted graduate outcomes.
6. Mathematics and basic science (chemistry, physics, and biology) courses are at appropriate levels.
7. Content of each course is appropriate.
8. Level of course material is appropriate.
9. Courses are built on previous course work.
10. Teaching-learning process includes appropriate assessment.
11. Internship and project work are at a sufficient level.
12. Students standing in terms of their admission standards, their academic performance, their industrial internship.
13. The academic and support staff in terms of their credentials and qualifications, their range of competencies, their advanced degrees, their

industrial experience, their teaching loads, their involvement and accountability as an Accreditation Team member for educational design, review and improvement, etc..

14. Facilities are appropriate for the program and its operation, sufficient laboratory space, adequacy of lab safety procedures, etc..

15. Quality management system is adequate for the program.

16. External assessment is appropriate, consistent and fair.

17. Quality loop is properly closed at both program and individual course levels.

These matters should be discussed by the Accreditation Team to ensure that they are all in agreement with the issues to be investigated during the accreditation visit and be used as a basis for finalizing proposed questions or themes for questioning during the various visit sessions. It should be noted that the objective is to be efficient with the time available, and to ensure that all of the questions and issues are addressed.

Accreditation Visit: Day 1

Time	Actions
9:00 am – 9:30 am	Briefing to the Accreditation Team by the Vice Chancellor/Rector on institutions Vision, Goals and Objectives, as well as institutions financial issues and concerns.
9:30 am – 10:00 am	Briefing to the Accreditation Team by the Dean of the Faculty with updates on changes which have occurred since the documentation was provided.
10:00 am – 11:00 am	Accreditation Team meeting with Department Head and/or Program Leaders to discuss curriculum design and quality systems.
11:00 am – 12:30 pm	Meetings with individual academic staff led by individual Accreditation Team members – schedule to be established the evening before.
12:30 pm –	Accreditation Team working lunch to include institutions

2:00 pm	administrators, Deans of engineering faculties and support programs.
2:00 pm – 3:00 pm	Visits to supporting units and facilities by individual Accreditation Team members.
3:00 pm – 4:00 pm	Accreditation Team meetings with students.
4:00 pm – 5.00 pm	Accreditation Team meeting with external stakeholders representatives of employers, alumni, industrial advisory and advisory body members.
5:00 pm – 6.00 pm	Meeting among Accreditation Team members to discuss issues and to prepare draft report.
6:00pm	Return to hotel.

Accreditation Visit: Day 2

Time	Actions
8:30 am – 10:00 am	Accreditation Team tours of engineering laboratories and associated facilities.
10:00 am – 11:00 am	Additional meetings of Accreditation Team with academic staff or students.
11:00 am – 1:00 pm	Accreditation Team review of examinations, course materials and student work (morning tea in review room).
1:00 pm – 2:30 pm	Accreditation Team working lunch with institutions Administrators, and Deans (no academic staff).
2:30 pm–3:30 pm	Accreditation Team review of quality assurance system and outcomes based assessment processes.
3:30 pm – 4:30 pm	Meeting among Accreditation Team members to revise draft report.
4:30 pm – 5:00 pm	Exit meeting with Dean of faculty, Heads of department, and other institutions administrators.

Throughout the discussions with the administrators, academic staff, students, and support staff, the Accreditation Team should confirm that an outcome–based approach to education is progressively being implemented by the

institution. Meeting with alumni, employers, and other stakeholders are important, as this would give an indication of their involvement in the Continual Quality Improvement process of the program.

Appendix III: Specific Program Criteria

1. Mechanical Engineering

Curriculum

The program must demonstrate that graduates have: Strong knowledge of math, chemistry, physics, computer technologies, and data acquisition and analysis tools; have the ability to integrate knowledge in major design and realization of engineering systems in three energy domains: thermal, fluid, and mechanical systems; have strong communication skills through report writing, public presentations, oral communications; strong sense of community and global affairs; the ability to engage in research; knowledge of entrepreneurial process;

Faculty

The program must demonstrate that the faculty are sufficient in quantity, have the expertise to carry out the mission, engage in the students growth through mentoring and advising, engage in continuous improvement to maintain currency in their related fields, and have the academic freedom to maintain a quality program.

Facilities

The program must have adequate library resources, adequate laboratories to provide related hands-on skills, and a machine shop with ample space to carry out projects.

2. Mechatronics Engineering

Curriculum

The program must demonstrate that graduates must have: Strong knowledge of math, chemistry, physics, computer technologies, and data acquisition and analysis tools; have the ability to integrate knowledge in major design and realization of mechatronic devices and embedded systems; have strong communication skills through report writing, public presentations, oral communications; strong sense of community and global affairs; the ability to engage in research; knowledge of entrepreneurial process;

Faculty

The program must demonstrate that the faculty are sufficient in quantity, have the expertise to carry out the mission, engage in the students growth through mentoring and advising, engage in continuous improvement to maintain currency in their related fields, and have the academic freedom to maintain a quality program.

Facilities

The program must have adequate library resources, adequate laboratories to provide related hands-on skills, and a machine shop with ample space to carry out projects.

3. Biomedical Instrumentation Engineering

Curriculum

The structure of the curriculum must provide both breadth and depth across the range of engineering topics implied by the title of the program.

The program must include:

Biology, physiology, microbiology and biochemistry,

Informatics and computer skills,

Advanced mathematics (including differential equations and statistics),

Science and engineering to solve the problems of biology-engineering interface: data acquisition,

Measurements and interpretation of data from living systems: process the data and interpret the result (instrumentation and signal processing),

Addressing the problems associated with the interaction between living and non-living materials and systems: biomaterials and biocompatibility,

Imaging techniques and differentiation between them,

Biomechanics, Technical drawing and project planning courses.

Faculty

Program faculty must have responsibility and sufficient authority to define, revise, implement, and achieve program objectives. The program must demonstrate that faculty teaching courses that are primarily biomedical engineering design in contents are qualified to teach the subject matter by virtue of professional licensure, or by education and design experience.

Facilities

The program must have adequate library resources, adequate laboratories to provide related hands-on skills especially in biomedical instrumentation, and a machine shop with ample space to carry out projects.

4. Surveyor Engineering

Curriculum

The program must prove that the graduates have competence In one or more following sectors:

Sciences of the instrumentation (topometry, geodesy)

Geomatique (GIS, teledetection, photogrammetry. . .)

Land ownership (the land register, land right, real expertise, delimitation)

Improvement of land and urban planning (urban planning, regulation, rural development, risk management)

The program has matters additional, complementary to the specialty:

techniques 'of the engineer (hydraulic, roads, driveways and various services)

preparation in the professional environment (project management, economy and business management, law the labor and social, accountancy)

the legal one (civil law, right of the environment, administrative law)

The program includes/understands the basic trainings of the engineer:

Basic sciences (mathematics, physics...)

TIC computer science and data processing (communication, programming, base data...)

To master languages

The evolutionary of program is established in dialogue with the professionals of the field

5. Civil Engineering

Curriculum

The program must demonstrate that graduates have: proficiency in mathematics through differential equations, probability and statistics, calculus-based physics, and general chemistry; proficiency in a minimum of four (4) recognized major civil engineering areas; the ability to conduct laboratory experiments and to critically analyze and interpret data in more than one of the recognized major civil engineering areas; the ability to perform civil engineering design by means of design experiences integrated throughout the professional component of the curriculum; and an understanding of professional practice issues such as: procurement of work, bidding versus quality-based selection processes, how the design professionals and the construction professions interact to construct a project, the importance of professional licensure and continuing education, and/or other professional practice issues.

Faculty

The program must demonstrate that faculty teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of professional licensure, or by education and design experience. The program must demonstrate that it is not critically dependent on one individual.

6. Electrical Engineering; Computer and Communication Engineering; Communication and Electronics Engineering

Curriculum

The structure of the curriculum must provide both breadth and depth across the range of engineering topics implied by the title of the program. The program must demonstrate that graduates have: knowledge of probability and statistics, including applications appropriate to the program name and objectives; and knowledge of mathematics through differential and integral calculus, basic sciences, computer science, and engineering sciences necessary to analyze and design complex electrical and electronic devices, software, and systems containing hardware and software components, as appropriate to program objectives. Programs containing the modifier

"electrical" in the title must also demonstrate that graduates have a knowledge of advanced mathematics, typically including differential equations, linear algebra, complex variables, and discrete mathematics. Programs containing the modifier "computer" in the title must also demonstrate that graduates have a knowledge of discrete mathematics.

Faculty

The faculty who teach in the program must be of sufficient number, and must have the competencies to cover all of the curricular areas of the program. There must be sufficient faculty to accommodate adequate levels of student-faculty interaction, student advising and counseling, university service activities, professional development, and interactions with practitioners and employers of graduates. The faculty must have sufficient qualifications and must ensure the proper guidance of the program, its evaluation and development.

Facilities

Classrooms, laboratories and associated equipment must be adequate to accomplish the program objectives and provide an atmosphere conducive to learning. Appropriate facilities must be available to foster faculty-student interaction and to create a climate which encourages professional development and professional activities. Programs must provide opportunities for students to learn the use of modern engineering tools. Computing and information infrastructures must be in place to support the scholarly activities of the students and faculty and the educational objectives of the institution.

7. Engineering Management

Curriculum

The program must demonstrate that graduates have: an understanding of the engineering relationships between the management tasks of planning, organization, leadership, control, and the human element in production, research, and service organizations; an understanding of and dealing with the stochastic nature of management systems. They must also be capable of

demonstrating the integration of management systems into a series of different technological environments.

Faculty

The major professional competence of the faculty must be in engineering, and the faculty should be experienced in the management of engineering and/or technical activities.

8. Computer and Communication Engineering

Curriculum

The program must demonstrate that graduates have good knowledge of:

- Basic sciences: physics (electricity, optics, electrostatic, magnetostatic), chemistry,
- Elementary and advanced Mathematics: differential and integral calculus, differential equations, algebra, linear algebra, complex analysis, probability and statistics, discrete mathematics, Fourier analysis, …
- Computer science: Boolean algebra, algorithms, programming, microprocessor and microcontroller
- Analog and Digital Electronics
- Analog and Digital Signal processing
- Computer and communication networks
- Digital communication
- Information theory and information coding
- Wireless communications
- Electromagnetics, wave propagation, Transmission Lines, antennas, Microwaves,
- the ability to integrate this knowledge in analysis and design of complex electronic devices, software, and systems containing hardware and software components.
- strong communication skills through report writing, public presentations, oral communications;
- strong sense of community and global affairs;
- the ability to engage in research;
- knowledge of entrepreneurial process;

9. Electronic Engineering Program

Curriculum

The structure of the curriculum must provide both breadth and depth across of engineering topics implied by this program. The program must demonstrate that graduates have good knowledge of:

- Basic sciences: physics (electricity, optics, electrostatic, magnetostatic), chemistry,
- Elementary and advanced Mathematics: differential and integral calculus, differential equations, algebra, linear algebra, complex analysis, probability and statistics, discrete mathematics, Fourier analysis, …
- Computer science: Boolean algebra, algorithms, programming, microprocessor and microcontroller
- Basic Electronics
- Signal processing
- Analog and digital integrated circuits
- Solid state electronics and semiconductor devices
- Electronic communications
- Wave propagation and antennas,…
- Embedded systems
- the ability to integrate this knowledge in analysis and design of complex electronic devices, software, and systems containing hardware and software components.
- strong communication skills through report writing, public presentations, oral communications;
- strong sense of community and global affairs;
- the ability to engage in research;
- knowledge of entrepreneurial process;

10. Electrical Engineering Program

Curriculum

The structure of the curriculum must provide both breadth and depth across of engineering topics implied by this program. The program must demonstrate that graduates have good knowledge of:

- Basic sciences: physics (electricity, electrostatic, magnetostatic, optics), chemistry,
- Elementary and advanced Mathematics: differential and integral calculus, differential equations, algebra, linear algebra, complex analysis, probability and statistics, discrete mathematics, Fourier analysis, …
- Computer science: Boolean algebra, algorithms, programming, microprocessors…
- Basic electronics, power electronics
- Electromagnetics, Electric machines, Electric drives
- Electric power transmission, high voltage engineering
- Electric power production, mechanical power plants
- Electric power protection
- Control theory and systems
- the ability to integrate this knowledge in analysis and design of complex electronic devices, software, and systems containing hardware and software components.
- strong communication skills through report writing, public presentations, oral communications;
- strong sense of community and global affairs;
- the ability to engage in research;
- knowledge of entrepreneurial process;

11. Computer Engineering Program

Curriculum

The structure of the curriculum must provide both breadth and depth across of engineering topics implied by this program.

- The program must demonstrate that graduates have good knowledge of:
- Basic sciences: physics (electricity, optics), chemistry,

- Elementary and advanced Mathematics: differential and integral calculus, differential equations, algebra, linear algebra, complex analysis, probability and statistics, discrete mathematics, Fourier analysis,
- Object Oriented Programming
- Digital Systems
- Discrete Structures
- Microprocessors
- Data Structures
- Transmission of Digital Signals
- Information Theory and Coding
- Programming Language Design
- Operating Systems
- DataBase Systems
- Computer Algorithms
- Computer Networks
- Computer Architecture
- the ability to integrate this knowledge in analysis and design of complex electronic devices, software, and systems containing hardware and software components.
- strong communication skills through report writing, public presentations, oral communications;
- strong sense of community and global affairs;
- the ability to engage in research;
- knowledge of entrepreneurial process;

12. Civil and Environmental Engineering Program

Curriculum

The structure of the curriculum must provide both breadth and depth across engineering topics implied by this program. The program must demonstrate that graduates have good knowledge of:

Basic sciences: physics, chemistry, mechanics (Statics, Dynamics);

Elementary and Advanced Mathematics: differential and integral calculus, differential equations, algebra, linear algebra, complex analysis, probability and statistics, discrete mathematics, Fourier analysis, …

Computer Science: algorithms, programming;

Fundamental principles and concepts of civil engineering providing sufficient specialty in sub-disciplines: Structural, Geotechnical, Surveying, Transportation, and Water Resources Engineering;

Analysis of Structures and Mechanical Properties of Structural Materials and Soil;

Design of Reinforced Concrete as well as Steel Structures;

Concepts, planning and design of Transportation networks;

Surveying and modern Geodesy (GPS);

Fundamental principles and design of Hydraulic and water-resources systems;

Planning and constructing infrastructure systems including buildings, bridges, highways, airports, tunnels, waste-water systems, dams, and harbors.

Acquire and cultivate the basic engineering principles and the mathematical, scientific, and computational skills required in formulating and solving problems in civil engineering projects;

Impart a sound understanding of the fundamental principles and concepts of civil engineering providing sufficient specialty in sub-disciplines;

Develop effective teamwork and strong communication skills through report writing, public presentations, and oral communications;

Prepare graduates to assume leading roles in the profession and the community while emphasizing the issues of professional and ethical conduct;

Ability to interpret, engage and administer scientific research.

13. Agricultural Engineering

Curriculum

The structure of the curriculum must provide both breadth and depth across the range of engineering topics implied by the title of the program. The program must demonstrate that graduates have knowledge of:

- Basic science in biology including applications appropriate to the program name and objectives
- Agricultural sciences and plant protection
- Landscaping
- Animal sciences
- Agro food sciences
- Science and engineering necessary to solve the problems, to analyze and design complex agricultural projects appropriate to program objectives.

Faculty

The program must demonstrate that the faculty are sufficient in quantity, have the expertise to carry out the mission, engage in the students growth through monitoring and advising, engage in continuous improvement to maintain currency in their related fields, and have the academic freedom to maintain a quality program.

Facilities

Classrooms, laboratories, library resources, appropriate experimental field and associated equipment must be adequate to accomplish the program objectives and provide an atmosphere conducive to learning. Appropriate facilities must be available to foster faculty-student interaction and to create a climate which encourages professional development and professional activities. Programs must provide opportunities for students to learn the use of modern engineering tools. Computing and information infrastructures must be in place to support the scholarly activities of the students and faculty and the educational objectives of the institution.

Appendix IV

Lebanese Accreditation Board for Engineering Programs - LABE

Request for Evaluation[1]

Part 1

Program Information

Institution[2] _____

_____

It is requested that the following programs be evaluated by LABE

Please read the enclosed instructions (see Part 3) before completing the following table.

Program or Option to be Evaluated[3]	Evaluation Type[4]	Degree[5]	Multiple Campuses[6]

Please indicate whether the following observers may visit your institution with the evaluation team (at no expense to your institution)[7]:

Representative of Ministry of Higher Education: Yes ☐ No ☐

International Observer: Yes ☐   No ☐

Signature _____   Date _____

Chief Administrative
Officer/President[8]

Lebanese Accreditation Board for Engineering Programs - LABE
Request for Evaluation
Part 2
Contact Information

Institution _____

Address _____

City _____ State _____ ZIP _____

Country _____

General Phone No. _____ URL[9] _____

General correspondence will be addressed to the Dean or equivalent and will be copied to the LABE Liaison if one is assigned.

Official notification of accreditation actions will also be copied to the Chief Administrative Officer/President.

Chief Administrative Officer _____

Title _____ Phone _____

E-mail _____ FAX _____

Address (if different from above) _____

Dean (or equivalent) _____

Title _____ Phone _____

E-mail _____ FAX _____

Address (if different from above) _____

LABE Liaison (if _____

Title _____ Phone _____

E-mail _____ FAX _____

Address (if different from above) _____

Lebanese Accreditation Board for Engineering Programs - LABE
Request for Evaluation
Part 3
Instructions

1. This form must be completed and received 6 month before the visit. A separate form is required for each Commission.

2. Enter the proper institution name. This is the name that will be used in lists of accredited programs distributed to the public.

3. List the _exact_ program name (not the department name). This should be the program name shown consistently on student transcripts and in your institution's catalog.

4. Codes for evaluation types are: FAR = full accreditation review, IV = interim focused visit, IR = interim report. New programs should enter NEW.

5. List the abbreviation of the degree granted upon successful completion of the program, e.g., BS, MS, BE, etc.

6. If this program is offered at a branch campus or off-campus location, enter the site. Provide a copy of Part 2 showing the address of the remote site and contact information if different from the contact information for the main campus.

7. When observers are identified, your institution will be given the opportunity to decline any individual observer if there is a perceived conflict of interest.

8. This form must be signed by the Chief Administrative Officer. This is the individual responsible for the institution submitting the Request for Evaluation. This individual typically carries the title of president.

9. Enter the web site URL which should be shown for your institution in the list of accredited programs on the LABE web site (www.labe.org.lb). Only one URL is permitted.

Appendix IV: Glossary

A glossary of terms and abbreviations is requested to make the report easier to read. This document must immediately follow the analysis of areas to be evaluated.

Academic calendar: The schedule of the institution for the academic year giving details of all academic and administrative events.

Academic year: The academic year is:

1. The duration of a specific program of study (which may not last a complete 12 months and is divided into terms, semesters or quarters).
2. The start and finish dates of the annual cycle of a university or national higher education system.

Accountability: Accountability is the requirement, when undertaking an activity, to expressly address the concerns, requirements or perspectives of others.

Accreditation: May refer to study programs and/or Institutions and is sometimes used as a synonym for recognition of prior and experiential learning.

Accreditation body: An independent body that develops educational standards, criteria and procedures and conducts expert visits and peer reviews to assess whether or not those criteria are met.

Accreditation duration: Accreditation decisions are usually limited to a fixed and stated period of time, after which the institution or program is required to engage with a more or less rigorous re-accreditation process.

Accreditation of programs: The process by which a qualification, a course or a program comes to be accepted by an external body as of a satisfactory quality and standard. Accreditation involves a periodic audit against published standards of the engineering education provided by a particular course or program. It is essentially a peer review process, undertaken by appropriately qualified and independent panels.

Accreditation of institutions: Accreditation is a formal, published statement regarding the quality of an educational institution, based on external assessment.

Accreditation of Prior Learning (APL): A process by which individuals can claim and gain credit towards qualifications based on demonstrated learning that has occurred at some time in the past.

Accreditation process: An evaluation or quality assurance procedure, assessing whether a study program or an institution meets or exceeds the academic or professional standards required by the accrediting body.

Admission to higher education institutions and programs: The process which allows qualified applicants entry to pursue higher education studies at a given institution on a given program.

Agency: Agency is, in the context of quality in higher education, shorthand for any organization that undertakes any kind of monitoring, evaluation or review of the quality of higher education.

Aim: An aim is an overall specification of the intention or purpose of a program of study or institutional mission or policy.

Alumnus: An alumnus (plural alumni) is a graduate of an institution.

Assessment: It is an evaluation process that may apply to programs, institutions or students.

1. With regards to students, it is the total range of written, oral and practical tests, as well as projects and portfolios, used to decide on their progress in the Course Unit or Module. These measures may be mainly used by the students to assess their own progress (formative assessment) or by the University to judge whether the course unit or module has been completed satisfactorily against the learning outcomes of the unit or module (summative assessment).

2. With regards to institutions and programs, it is the process of systematic gathering, quantifying and using information to judge the effectiveness and adequacy of a higher education institution or a program. It implies evaluation of core activities. It is a necessary basis for a formal accreditation decision.

Assessment criteria: Description of what the learner is expected to do, in order to demonstrate that a learning outcome has been achieved and to what extent. The criteria are usually related to the cycle and/or level descriptors for the module being studied in the discipline concerned.

Continuous Assessment: Assessment taken on an ongoing basis as part of a module or course unit which contributes to the final mark.

Formative Assessment: Various methods of testing a student's understanding which do not contribute any marks to the final score for the module or course unit.

Peer Assessment: A process by which students assess work carried out by their peers which may contribute to their learning process and/or the mark for the module or unit of assessment.

Self Assessment: Process of a student appraising his/her skills, knowledge, attitudes etc. to add his/her portfolio of learning (e.g. his/her contribution to an annual appraisal).

Summative Assessment: Various methods of assessing the student's achievement of the module/course unit's and/or program's learning outcomes which contribute marks to the final score.

Assurance: Assurance of quality in higher education is a process of establishing stakeholder confidence that provision (input, process and outcomes) fulfils expectations or measures up to threshold minimum requirements.

Attribute(s): 1. Specific skills to demonstrate competences.

2. A quality or feature that someone or something has.

Audit: Audit, in the context of quality in higher education, is a process for checking that procedures are in place to assure quality, integrity or standards of provision and outcomes.

Audit criteria: Audit criteria indicate the requirements for institutional policies, systems, strategies and resources for assuring, developing and monitoring the quality of teaching and learning, research and community engagement.

Audit cycle: A six-year period in which every higher education institution will be audited at least once.

Audit evidence: Information provided by the institution in its audit portfolio and presented to the audit panel by institutional and other interviewees with regard to the claims made in the audit portfolio. Audit evidence is evaluated by the panel, in accordance with the audit agency criteria, in order to make commendations and recommendations on the institution's quality management system.

Audit panel: External panel of peers and experts, who are selected by the agency to conduct institutional audits on the basis of their relevant knowledge and experience, and who are trained by the agency for this purpose.

Audit portfolio: Self-evaluation report of the institution to be audited with appendices and documentary evidence, in which evidence on the effectiveness of the institution's policies, systems, strategies and resources for quality management in the areas of teaching and learning, research and community engagement is described, analyzed and evaluated against the audit agency criteria.

Audit report: Evaluation report from the audit agency to the audited institution. On the basis of the quantitative and qualitative evidence gathered during the audit, the report is developed by the audit agency on the basis of panel deliberations and finalized in consultation with the chairperson and other

members of the audit panel. The report provides an assessment of the adequacy and effectiveness of the internal quality arrangements of the institution, as well as commendations and recommendations in the various target areas of the audit.

Audit scope: Range of areas for evaluation during the institutional audit.

Audit visit: Site visit of two to five days, during which time the audit panel engages in various evaluative activities, such as conducting interviews and scrutinizing documents, in order to validate the claims that are made in the audit portfolio.

Autonomy: Autonomy is being able to undertake activities without seeking permission from a controlling body.

Assessors: Trained specialists who are peer team members.

Bachelor: Usual term for First Cycle Degree awarded after successful completion of a First Cycle Study Program. Often used with extension to indicate a discipline or a specific profile of the course (Bachelor of Arts (B.A.), Bachelor of Science (B.Sc.), Bachelor of Engineering (B.Eng.) etc.).

Benchmarking: Benchmarking is a process that enables comparison of inputs, processes or outputs between institutions (or parts of institutions) or within a single institution over time.

Best practice: Is a comprehensive, integrated and co-operative approach for the continuous improvement of area/s of performance in an organization: the winning strategies, approaches and processes that produce superior performance leading to a sustainable and successful end result. Benefits often include the assurance of quality results and consistency where the practice is followed

Bologna Declaration: A document signed by the Ministers of Education of 29 European Countries in Bologna in June 1999, to establish a European Higher

Education Area and adapt the national education systems to a common European Higher Education System by 2010.

Bologna process: The implementation of the Bologna Declaration, in accordance with a series of declarations of Higher Education Ministers, extending the original document (Paris, 1998; Bologna, 1999; Prague, 2001; Berlin 2003; Bergen 2005 and any future declaration). Meanwhile signed by 45 European Countries.

Branch of study: Specialization within a given field of study (e.g. Mechanical Engineering, Electrical Engineering). It can also refer to a specialization within a broader branch (e.g. Hydraulic Engineering, within Civil Engineering).

Competence: Proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and/or personal development. In the European Qualifications Framework for lifelong learning, competence is described in terms of responsibility and autonomy.

Course: It may refer to a complete study program or to a single component (such as Unit or Module) of a study program.

Creativity: The ability to produce new ideas, connections and solutions.

Curriculum: Comprehensive description of a study program. It includes learning objectives or intended outcomes, contents, assessments procedures.

Certificate: A document stating that a student has earned a qualification from an educational institution, at a particular level. It may refer to any qualification or award, but in some countries it characterizes specific awards or titles.

Certification: Certification is the process of formally acknowledging achievement or compliance: it can be used to signify the achievement of an individual, such as a student, or of an institution.

Class: Group of students following a course for a determined period of time. It is sometimes used as a special type of teaching activity (e.g. Sub-group, Laboratory).

Classification: Classification is the process of identifying types of institution based on their core functions or economic status.

Community engagement: Initiatives and processes, through which the expertise of the institution in the areas of teaching and research, are applied to address issues relevant to its community. Community engagement typically finds expression in a variety of forms, ranging from informal and relatively unstructured activities to formal and structured academic programs addressed at particular community needs (service learning programs).

Cooperative education: A philosophy of learning that promotes the concept of enhanced learning based on cooperation between education institutions and industry, commerce and the public sector.

Contact hour: A period of 45-60 minutes of teaching/learning activity in which a staff member is engaged face to face with a learner or a group of learners.

Continuing Professional Development (CPD): It is the means by which people at work maintain, improve and broaden their knowledge and skills and develop the personal qualities required in their professional lives .

Conflict of Interest: is a situation in which an internal auditor, who is in a position of trust, has a competing professional or personal interest. Such competing interests can make it difficult to fulfill his or her duties impartially.

Continuing education: Continuing education is:

1. A generic term for any program of study (award-bearing or not) beyond compulsory education.
2. Post-compulsory education of a short-term nature that does not lead directly to a major higher education qualification.

Citation index: Citation index of a research paper expresses the number of times it is refereed to by other researchers in referred journals and is a measure of validity of its contents.

Collaboration for research and extension: Formal agreement/ understanding between any two or more institutions for training, student/faculty exchange or extension support.

Counseling: Exhorting, assisting and mentoring students individually or collectively for academic, career, personal and financial decision-making.

Credit: The "currency" used to measure student workload in terms of the notional learning time required to achieve specified learning outcomes. To each course unit a certain amount of credits are assigned. Credits can also be acquired by extra-curricula activities and in non higher education contexts, including lifelong learning and Continuing Professional Development, provided they are recognized by receiving institutions concerned.

 Credit accumulation: In a credit accumulation system a specified number of credits must be achieved in order to successfully complete a term, a semester, an academic year or a full study program. Credits are awarded and accumulated if the achievement of the required learning outcomes is proved by assessment. Credit accumulation allows learners to study individual course units and modules without immediately achieving an academic award. It also allows for the award of interim qualifications where students do not complete a full study program leading to the award of a degree.

Credit level: An indicator of the partial learning outcomes to be achieved: it is sometimes associated with the year of study (e.g. level 1/2/3 over a three-year program), or the type of course content (e.g. Basic/Intermediate/Advanced).

Credit system: It sets out the number of modules and credits attached to them that constitute a study program and what is required to obtain a degree or qualification. A credit system facilitates the comparison of learning outcomes achieved in the context of different qualifications and study programs.

Credit transfer: The acceptance of credits obtained for a certain purpose, as credits towards another purpose or in another institution.

Criteria: Pre-determined standards of functioning of an institution of higher education that form the basis of assessment and accreditation.

Curriculum design and development: Process of designing and developing appropriate curriculum through a need assessment process and consultation with expert groups based on the feedback from the stakeholders resulting in the development of relevant programs to meet the professional and personnel needs of the students.

Diploma: A qualification from an educational institution, at a particular level. It may refer to any qualification or award, but in some countries it characterizes specific awards or titles. (Example: . Dipl.-Ing., Ingénieur Diplômé, etc.)

Diploma supplement: It is an annex to the official qualification document awarded by the higher education institution. It is designed to provide more detailed information on the studies completed according to an agreed format (drawn up by the European Commission, the Council of Europe and UNESCO/CEPES) which is internationally recognized. It provides a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the holder of the qualification. It aims at improving the international transparency and the academic/professional recognition of qualifications.

Discipline: A particular area of study, especially a subject of study in a college or university

Doctor: Usually, the holder of a title awarded after successful completion of a Doctorate Program or the delivery and defense of a doctorate thesis. It is sometimes characterized as Ph.D. (Doctor of Philosophy). When used without extension, the title usually refers to a Doctor of Medicine.

Doctorate: A study program towards high level qualification recognized as qualifying someone for research and/or academic work. It will include a

substantial amount of original work which is presented in a thesis. In the European Higher Education System it is identified with the third cycle study.

Degree: Degree is the core higher education award, which may be offered at various levels from foundation, through bachelors, masters to doctoral.

Joint Degree: A higher education qualification issued jointly by two or more higher education institutions on the basis of a joint study program.

Doctoral degree: The doctoral degree is the highest level of award in most higher education systems.

ECTS: Acronym for European Credit Transfer System, originally developed by the European Commission in order to increase the transparency of educational systems and facilitate the mobility of students across Europe through credit transfer from one higher education institution to another. It is based on the general assumption that the global workload of an academic year of study is equal to 60 credits.

ECTS Grading System: Whereas ECTS credits are allocated to successful students only, ECTS grades are awarded to all students. Those who have passed are rated into five sub-groups: the best 10%, receiving the additional grade "A" next to the national grade, the next 25% a "B", the following 30% a "C", the next 25% a "D" and the final 10% a "E"-grade respectively.

Education: The act, process or art of imparting knowledge, understanding, skills and attitudes normally given by formal education providers like schools, colleges, universities, or other educational institutes. Education may be general or related to specific disciplines (e.g. Engineering education).

Continuing Education: Any form of education, vocational or general, following the initial education. It may include, for example, education for full-time mature students, liberal adult education, part-time degrees and diplomas, post-experience professional education and training courses, staff development, open-access courses and regional development through open and distance learning.

Higher Education: All types of study programs at the post-secondary level which are recognized by the competent authorities as belonging to its higher education system.

Higher Education Institution: An establishment providing higher education.

Employability: It is a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in the chosen occupations, which benefits themselves, the workforce, the community and the economy.

Equivalence: The recognition by an organization/competent authority that course units, modules, study programs or degrees awarded by different institutions of higher education are equivalent. When an exact matching cannot be found, equivalence is often qualified as substantial equivalence.

EUR-ACE: (EURopean ACcredited Engineer): Project for the "Accreditation of European Engineering Programs and Graduates".

Extra-curricular activity: An activity undertaken outside the formal curriculum of a study program. It may be awarded credits.

Effectiveness: Effectiveness is the extent to which an activity fulfils its intended purpose or function.

Efficiency: Efficiency is the extent to which an activity achieves its goal whilst minimizing resource usage.

Enhancement: Enhancement is a process of augmentation or improvement.

Evaluation: Evaluation (of quality or standards) is the process of examining and passing a judgment on the appropriateness or level of quality or standards.

Excellence: Excellence means exhibiting characteristics that are very good and, implicitly, not achievable by all.

External evaluation: External evaluation is:

1. A generic term for most forms of quality review, enquiry or exploration.
2. A process that uses people external to the program or institution to evaluate quality or standards.

External evaluation team: External evaluation team is the group of people, including persons external to the program or institution being reviewed, who undertake the quality evaluation.

External examiner: An external examiner is a person from another institution or organization who monitors the assessment process of an institution for fairness and academic standards.

External expert: External expert is someone with appropriate knowledge who undertakes a quality or standards review (of any kind) as part of a team or alone and who is external to the program or institution being reviewed.

External institutional audit: An external institutional audit is a process by which an external person or team check that procedures are in place across an institution to assure quality, integrity or standards of provision and outcomes.

Evaluation process and reforms: Assessment of learning, teaching and evaluation process and reforms to increase the efficiency and effectiveness of the system

Field of study: The main subject area of a study program (e.g. Engineering).

Faculty: Faculty is:

The organizational unit into which cognate disciplines are located in a higher education institution

1. A shorthand term for the academic (teaching and research) staff in a higher education institution.
2. Fees: Fees are the financial contribution made by students to their higher education

Feedback on curriculum and curriculum revision: Response from student's academic peers and employers for review and design of curriculum programs.

Financial management and resource mobilization: Budgeting and optimum utilization of financial resources including planning and implementing strategies for augmenting resources.

Format for self-study: Structured framework to enable an institution to collect, compile and present quantitative and qualitative information.

Flexibility: Enables student's greater horizontal mobility with a large number of program options in diverse disciplines.

Grant: Grant has different accepted meanings.

1. It can be a sum of money awarded by funding bodies to undertake a project or research.
2. Alternatively, it can be awarded to students (e.g. as part of widening participation strategies) to facilitate their progression to or in higher education (sometimes also referred to as a bursary or scholarship).

Grading: Grading is the process of scoring or ranking student academic work as part of assessing student learning.

Graduate: A graduate is someone who has successfully completed a higher education program at least at bachelor degree level.

Human resource Management: The process of assessing the man power requirements, recruiting, monitoring the growth and appraising them periodically and plan the staff development programs for the professional development and provide the necessary incentives and feedback.

Institution: Institution is shorthand for institution of higher education, which is an educational institution that has students graduating at bachelor degree level or above.

Institutional accreditation: Institutional accreditation provides a license for a university or college to operate.

Internal evaluation: Internal evaluation is a process of quality review undertaken within an institution for its own ends (with or without the involvement of external peers).

Internal institutional audit: Internal institutional audit is a process that institutions undertake for themselves to check that they have procedures in place to assure quality, integrity or standards of provision and outcomes across the institution.

Internal sub-institutional audit: Internal sub-institutional audit is a process that an institution has for checking that procedures are in place to assure quality, integrity or standards of provision and outcomes within a department, faculty or other operational unit or that specific issues are being complied with across the institution.

ICT: The term refers to computer and allied gadgetry that have a bearing on the efficiency of services both academic and administrative, which an institution provides.

Internal quality assurance system: Self regulated responsibilities of the higher education institutions aimed at continuous improvement of quality for achieving academic excellence and administrative reforms.

Institutional quality management system: Institutional policies, systems, strategies and resources for assuring, developing and monitoring the quality of teaching and learning, research and community engagement.

Innovation: Meaningful change to improve an organization's program, services and processes to create a new value for the organization's stakeholders.

Infrastructure: Physical facilities like building, play fields, hostels etc. which help run an institutional program.

Laboratory: In educational context, practical experimental class where the students are active and supervised by a staff member and/or assistants.

Learning: The process whereby individuals acquire knowledge, skills and attitudes through experience, reflection, study education and/or instruction.

e-Learning: Any structured learning activity using information and communication technologies.

Learning Objectives: The specific knowledge, skills and/or competences which a teaching/learning process aims to achieve.

Learning Outcomes: Statements of what a learner knows, understands and is able to do on completion of a learning process. They usually are defined in terms of knowledge, skills and/or competences. For assessment purposes they may be specified by learning outcomes indicators.

Project-organized Learning: A pedagogical approach to organize learning opportunities in groups of students over an extended but limited time span (e.g. a semester), dealing with a usually open-ended and complex problem. Organizing the work and learning process is done by the students rather than by the teacher. Project-organized learning can dominate and structure a whole study program and is supposed to create a motivating, practice-related, interdependent, collaborative and knowledge-sharing learning environment.

Problem-based Learning: A pedagogical approach to organize learning opportunities on the basis of a specific problem from a field of study or subject or from professional practice. The student/s identify lack of knowledge and select items to study based on their interests and educational context and develop their problem-solving abilities. Problem-based learning is very often done by groups of students.

Lecture: 1. It is a set piece period of learning delivered by a lecturer to an entire class of students in which s/he imparts essential background and theory (basic concepts or facts) or examples. Typical length of a lecture is two contact hours.

2. A talk someone gives in order to teach people about a particular subject, usually at university or college.

Library as a learning resource: The library holdings in terms of titles of books, journals and other learning materials and technology aided learning mechanism, which enable the students to acquire information, knowledge and skills required for their study.

Leadership: Term used for setting direction and create a student-focused, learning oriented climate, clear and visible values and high expectation by ensuring the creation of strategies, system and methods for achieving excellence, stimulating innovation and building knowledge and capabilities.

Level: A threshold standard of achievement within a hierarchy of levels, e.g. within a qualifications framework.

Master's degree: Master's degree is an award higher than a bachelor's degree.

Mission: A brief statement clearly identifying the educational institution's duty and its role in the development of the surrounding society and the nation, all in light of its strategic goals.

Mobility: Mobility is shorthand for students and academics studying and working in other institutions, whether in the same country or abroad.

Moderator: A person, apart from the examiner, who is appointed by the institution to be responsible for ensuring the standard of the examination and its accompanying marking framework and response exemplars, and for marking a representative sample of examination responses.

Module specification: Module specification is statement of the aims, objectives/learning outcomes, content, learning and teaching processes, mode of assessment of students and learning resources applicable to a unit of study.

Maintenance of infrastructure: The effective mechanism for maintenance of optimal use of infrastructure

Objective: An objective is:

1. A specific statement about what students are expected to learn or to be able to do as a result of studying a program: more specifically this is a learning objective;

2. A measurable operationalization of a policy, strategy or mission: this is an implementation objective.

Outcomes: Outcome is:

1. Shorthand for the product or endeavors of a higher education institution (or sector), including student learning and skills development, research outputs and contributions to the wider society locally or internationally (institutional outcomes).

2. Shorthand for learning outcome (discussed elsewhere).

Organizational structure: The structure and functions of an institution to co-ordinate academic and administrative planning.

Optimum utilization of infrastructure: The infrastructure facilities are made available to the student for their maximum utilization. E.g., extended hours for computer center and library, sharing of facilities for interdisciplinary and multidisciplinary programs.

Peer: A person who is of equal standing with another in a group. Increasingly used for "evaluator" or "assessor" in a Quality Assurance and/or accreditation process, to underline that it is a "peer process".

Peer Review: 1. External review and evaluation of the quality and effectiveness of an Institution, academic programs, staffing and structure, carried out by a team of external evaluator ("peers") who are specialists in the fields reviewed and knowledgeable about higher education in general. Reviews may be based on self-evaluation and on site visits and referred to standards set by the accredited organizations or quality standards set more broadly.

2. The process by which students assess and evaluate the contributions made by their peers to a specified piece of learning, e.g. project. This would normally contribute to the marks for the module/course unity.

Placement (or Internship or Stage): A planned period of learning or practical work normally outside the institution at which the student is enrolled, where the intended learning outcomes are an integral part of a study program.

Prerequisites: Any prior conditions or specific courses that must be fulfilled before access to another program or part of a program.

Profession: An activity, access to which, the practice of which, or one of the modes of pursuit is subject, directly or indirectly, to legislative, regulatory or administrative provisions concerning possession of specific higher education (and possibly training) requirements.

Study Program: A course of study recognized by the competent authority of a State as belonging to its higher education system, and the completion of which provides the student with a higher education qualification. It has a set of learning outcomes and is composed of compulsory and optional course units/modules which lead to the achievement of a pre-determined set of learning outcomes.

Joint Study Program: A study program developed and/or provided jointly by two or more higher education institutions, possibly also in cooperation with other institutions.

Performance indicators: Performance indicators are data, usually quantitative in form, that provide a measure of some aspect of an individual's or organization's performance against which changes in performance or the performance of others can be compared.

Performance audit: Performance audit is a check on the competence of someone to undertake a task.

Postgraduate: A postgraduate is someone who is undertaking study at post-first degree level.

Process: Process, in the context of quality, is the set of activities, structures and guidelines that:

1. Constitute the organization's or individual's procedures for ensuring their own quality or standards.
2. Constitute the mechanism for reviewing or monitoring the quality or standards of another entity.

Program evaluation: Program evaluation is a process of reviewing the quality or standards of a coherent set of study modules.

Progress file: A progress file is an explicit record of achievement, an aid to reflecting on the achievement and a mechanism to enable future planning.

Project: In general, a set of planned, interrelated activities aimed at achieving defined objectives. For engineering education it may also be a study task developed by one or more students.

Promotion of research and research support system: The process of promoting research culture among faculty and students by facilitating faculty and student participation in research budget allocation, research fellowship and other faculties.

Physical facilities: Infrastructure facilities of the institution to run the educational programs efficiently and the growth of the infrastructure to keep pace with the academic growth of the institution.

Perspective plan and strategic development: Designing and implementing a time-bound strategic perspective vision document for institutional development with prioritized activities and appropriate financial allocations.

Qualification: A generic term that usually refers to an award granted for the successful completion of a study program. It is the formal outcome of an assessment and validation process which is obtained when a competent body

determines that an individual has achieved pre-determined learning outcomes to given standards.

Higher Education Qualification: Any degree, diploma or other certificate issued by a competent authority attesting the successful completion of a higher education program.

Qualification giving access to higher education: A certificate issued by a competent authority attesting the successful completion of a study program giving the holder the right to be considered for admission to higher education.

Professional Qualification: The set of requirements necessary for access to a profession, in particular a regulated profession.

National Qualifications Framework: An instrument for the classification of qualifications according to a set of criteria for specified levels of learning achieved. It aims to integrate and coordinate national qualifications sub-systems and improve the transparency, access, progression and quality of qualifications in relation to the labor market and civil society.

National Qualifications System: All aspects of a certain State's activity related to the recognition of learning and other mechanisms that link education and training to the labor market and civil society. A national qualification system may be composed of several sub-systems and may include a national qualifications framework.

Transparency of Qualifications: The degree to which the value of qualifications can be identified and compared on the labor market, in education and training and in a wider social setting.

Quality in higher education: The extent to which a course unit, the teaching and learning activities and the provider's facilities help students achieve appropriate learning goals of a study program.

Quality Assessment (QA): Process usually carried out by an external body. It assesses the performance of a higher education unit against written objectives

that might be determined solely by the higher education unit or by agreement between it and the Assessing Authority.

Quality Assurance: The structure and/or the processes by which an institution maintains the quality of its provision by planned and systematic actions. It is an umbrella term for several instruments which are concerned with the monitoring and development of quality. These instruments include evaluation, accreditation, benchmarking and quality management tools. National quality assurance systems should include:

1. A definition of the responsibilities of the bodies and institutions involved;
2. Evaluation of programs or institutions including internal assessment, external review, participation of students and the publication of results;
3. A system of accreditation, certification or comparable procedures;
4. International participation, cooperation and networking.

Quality Audit: A process carried out periodically by a higher education institution or by external reviewers/bodies to evaluate the institutional quality assurance system and processes in order to determine whether both quality system activities and the results of such activities comply with quality system procedures, that these procedures are implemented effectively, and that these procedures are suitable to achieve quality system objectives.

Quality Control: Internal measurement of quality of an institution or a program referring to a set of operational activities and techniques.

Quality culture: A set of shared, accepted and integrated patterns of quality to be found in the management and all other levels of an institution.

Quality improvement plan: A plan developed by the audited institution specifying activities, designated responsibilities and time frames in order to address the requirements and recommendations of the audit report.

Quality management: Institutional arrangements for assuring, supporting, developing and enhancing, and monitoring the quality of teaching and learning, research and community engagement.

Recognition: The provision by which a body or institution (the recognizer) considers another body or institution (the recognized) appropriate or competent for a certain purpose.

Recognition of prior learning: Formal identification, assessment and acknowledgement of the full range of a person's knowledge, skills and capabilities acquired through formal, informal or non-formal training, on the-job or life experience.

Recruitment: The process by which an academic institution identifies potential students and assesses them for admission to a particular program.

Re-accreditation: Re-accreditation is the re-establishment or re-statement (usually on a fixed periodic cycle) of the status, legitimacy or appropriateness of an institution, program (i.e. composite of modules) or module of study or of the professional recognition of an individual.

Report: The annual report of the faculty prepared on the basis of reports of its educational program

Research and publication output: Quality research outcome beneficial for the discipline, society and industry and dissemination of knowledge including theoretical and practical findings of research through publication in reputed refereed journals nationally and internationally.

Research: Systematic intellectual investigations aimed at discovering, interpreting and revising human knowledge.

Research grant: Grant generated/ received from different agencies by the institution for conducting research projects.

Scholarship: Financial support provided to a high-achieving student to cover, in total or in part, fees and/or living expenses. It may come from national governments, charitable foundations or private sectors.

Service learning: Applied learning, which is directed at specific community needs and is integrated into an academic program and curriculum. It could be

credit-bearing and assessed, and may or may not take place in a work environment.

Syllabus: List of topics (content) of a Course Unit. In the USA it is also used for the content of a Study Program.

Self-assessment: Self-assessment is the process of critically reviewing the quality of one's own performance and provision.

Semester: A semester is a division of the academic year; usually two semesters in a year.

Seminar: A seminar is, ideally, a small-group teaching situation in which a subject is discussed, in depth, by the participants.

Site visit: A site visit is is when an external evaluation team goes to an institution to evaluate verbal, written and visual evidence.

Skills: The ability to apply knowledge and use know-how to complete tasks and solve problems. In the European Qualifications Framework, skills are described as cognitive (use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).

Core skills: Those skills which are essential to succeed in a discipline/subject area (e.g. engineering) and which are essential for a successful performance in that discipline.

Measurable skills: The skills for which there are clear performance criteria/indicators.

Transferable skills: Skills which can be used in different work and learning environments; in other words, which can be transferred from one situation to the next (e.g. communication skills, report writing, etc.).

Stakeholder relationship: Affiliation and interaction with groups or individuals who have an interest in the actions of the institutions and the ability to influence its actions, decisions, policies, practices or goals of the organization.

Strategy development and deployment: Formulation of objectives, directives and guidelines with specific plans for institutional development and their appropriate implementation.

Strategic objectives: A collection of institution-specific objectives that are derived from its mission. They are written in a general manner concentrating on the knowledge and skills that the institution intends to develop in its students.

Student progression: Vertical movement of students from one level of education to the next higher level successfully or towards gainful employment.

Student support: Facilitating mechanism for access to information fee structure and refund policies and also guidance and placement cell with student welfare measures to give necessary learning support to the students.

Student activities: The participation of the students in the activities, which are instrumental in developing various skills to foster holistic personality development.

Social responsibility: Focuses on responsibilities to the public in terms of protection of public health, safety and the environment, the public ethical behavior and the need to practice good citizenship.

Thesis: Thesis is:

1. Short hand for doctoral thesis, the outcome of a student research at doctoral level.
2. An argument proposing and developing a theory about a substantive or conceptual issue.
3. An intellectual proposition.

Teaching-learning process: Learner-centered education through appropriate methodologies to facilitate effective teaching and learning.

Teacher quality: A composite term to indicate the quality of teachers in terms of qualification of the faculty, the adequacy meant for recruitment procedures, professional development, recognition and teachers characteristics.

Training: Systematic instruction and programs of activities and learning for the purpose of acquiring skills for particular jobs..

Transcript: The official record or breakdown of a student's progress and achievements. Many modular credit-based education systems employ detailed transcripts that show the grades for the course units undertaken.

Transferability: Conditions that allow the recognition of vocational or academic degrees and credits in institutions other than those in which they are originally awarded.

Tutorial: Didactical activity with a relatively small number of students per staff member, often involving problem solving. Students are expected to take an active part.

University: An autonomous higher education institution which offers education at degree level. Courses may be taken at bachelor, master or doctorate level

Undergraduate: Undergraduate is a student who is undertaking a first-level degree program of study, normally a bachelor's degree or equivalent.

Unit of assessment and accreditation: A University/ Autonomous College/ Affiliated College/ Constituent College/ A Department of a University constitutes the unit of assessment and accreditation

Validation: It may refer to the validation of a study program or of a process of informal/non-formal learning.

Validation of a study program: The process by which an awarding institution judges that a program of study leading to an award is of appropriate quality and standard.

Workload: A quantitative measure of the learning activities that may feasibly be required for the achievement of the learning outcomes (e.g. lectures, seminars, practical work, private study, information retrieval, research, examinations)

Work-based learning: A component of a learning program that focuses on the application of theory in an authentic, work-based context. It addresses specific competences identified for the acquisition of a qualification, which relate to the development of skills that will make the learner employable and will assist in developing his/her personal skills. Employer and professional bodies are involved in the assessment of experiential learning, together with academic staff.

Ministry Of Education And Higher Education
Directorate General of Higher Education

Tempus Lebanon

Part III

Self-Study Report Template

LABE
SELF-STUDY QUESTIONNAIRE

http://www.labe.org.lb

General Instructions
Introduction

This Self-Study Questionnaire is a template with instructions and suggestions to help you prepare the Self-Study Report that will be used by LABE in accrediting your program.

Preparation

The program name should appear on the cover of the Self-Study Report and should be consistent with the name listed in the college catalog, in the institution's Request for Evaluation, and on transcripts of graduates.

In case your program uses terminology that is different from that used in this Questionnaire, it is important to clearly correlate the terminology in terms of the terminology used in the Questionnaire.

The term *educational unit* used in this report refers to the administrative unit having academic responsibility for the programs being evaluated; the educational unit may be the department if a single program is being evaluated or the college if a several programs offered by different departments are being evaluated.

The tables included in the Questionnaire may not be specifically applicable to your institution and/or program. If so, the tables may be modified to more clearly present the data for your program. A brief explanatory footnote may be included to explain why the table has been modified. Tables may be adjusted to the needed size by adding or deleting rows.

Angular brackets "<<" and ">>" indicate that the brackets and the enclosed text should be replaced by text appropriate to your program. "Braces, i.e., "{{" and "}}", denote instructions; these braces and their enclosed text should be removed from the final version of your Self-Study Report.

Supplemental Materials

The following additional materials are to be supplied:
  1. A copy of the general catalog of the institution covering course details and other institutional information applicable at the time of the visit.

  2. A copy of any promotional brochures or literature describing the program offerings of the institution to the public.

  3. Transcripts from recent graduates. The visiting Team Chair will specify the number, how they should be selected, and when they should be provided to the Team Members.

Submission and Distribution

Submit one copy of the Self-Study Report for each program and one set of the supplemental material to LABE Headquarters, to the Team Chair, and (following instructions from the Team Chair) to each Program Evaluator and Observer six months prior to the scheduled visit.

Any new or updated material that becomes available between the time the Self-Study Report is assembled and the date of the visit should be provided to the team members in advance or upon arrival at the campus.

Confidentiality

The information supplied in the submitted Self-Study Report is for the confidential use of LABE and its authorized associates, and will not be disclosed without authorization of the institution concerned, except for summary data not identifiable to a specific institution.

Template

The template for the Self-Study Report begins on the next page.

{{Cover page for the Self-Study Report}}

LABE
Self-Study Report

for the
<<Program Name as shown on the RFE>>

Program
At
<<Institution Name as shown on the RFE>>

<<Location i.e., city, of the Institution>>

{{If this program is offered and is being evaluated at more than one campus location, also include the campus designation and the location for each campus}}

<<A small Institution logo may be inserted at this location if desired>>

Date, <<Year of the visit>>

Table of Contents

Self-Study Report

<<Program Name>>

<<Degree Awarded>>

<<Institution Name>>

BACKGROUND INFORMATION

- **Contact information**

  <<List name, mailing address, telephone number, fax number, and e-mail address for the primary pre-visit contact person, i.e., Dean, Department Chair, Program Director>>

- **Program History**

  <<Include year implemented and summarize major program changes with an emphasis on changes occurring since the last visit>>

- **Options**

  <<List and describe any options, tracks, concentrations, etc. included in the program>>

- **Organizational Structure**

  <<Use text and/or organization charts to describe the administrative structure of the program from the program to the department, college, and upper administration of your institution, as appropriate>>

- **Program Delivery Modes**

  <<Describe the delivery modes used by this program, e.g., days, evenings, weekends, cooperative education, traditional lecture/laboratory, off-campus, distance education, web-based, etc.>>

- **Deficiencies, Weaknesses or Concerns Documented in the Final Report from the Previous Evaluation(s) and the Actions taken to Address them**

  <<Summarize the Deficiencies, Weaknesses, or Concerns documented in the Final Report from the previous general evaluation and succeeding interim reviews, if any. Describe the actions taken to address them, including effective dates of actions, if applicable. If this is an initial accreditation, it should be so indicated>>

GENERAL CRITERIA

1. Program

Definitions

Program educational objectives are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve. Assessment under this criterion is one or more processes that identify, collect, and prepare data to evaluate the achievement of program educational objectives. Evaluation under this criterion is one or more processes for interpreting the data and evidence accumulated through assessment practices. Evaluation determines the

extent to which program educational objectives are being achieved, and results in decisions and actions to improve the program.

Program outcomes are narrower statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that students acquire in their matriculation through the program.

a. Mission Statement
<<Provide a copy or summary of any applicable institutional, college, departmental, and program Mission Statements and document where they are published>>

b. Educational Objectives
- <<List the Program Educational Objectives and state where these are published
- <<Describe how the objectives conform to the current criteria and how it is congruent with the mission of the institution>>
- <<List and describe the Program Constituencies
- <<Describe the process by which the stated objectives are developed, continually assessed, improved and documented to ensure conformity with the needs of the program's various constituencies and >>
- <<Describe how the program has the support to ensure that the students' learning outcomes are achieved>>
- <<Describe the process to assess the attainment of the objectives and how such assessment is used to improve the learning outcomes>>.

c. Program Outcomes
⇒ <<Describe the process used for establishing and revising Program Outcomes>>
⇒ <<List the Program Outcomes and describe how they encompass the professional component and any applicable Program Criteria. Indicate where the Program Outcomes are documented>>
⇒ <<Describe how the Program Outcomes lead to the achievement of the Program Educational Objectives>>
⇒ <<Describe the relationship of courses in the curriculum to the Program Outcomes>>
⇒ **<<**Describe by example how the evaluation team will be able to relate the display materials, i.e., course syllabi, sample student work, etc., to each Program Outcome>>
⇒ **<< Explain the assessment and evaluation processes that periodically document and demonstrate the degree to which the Program Outcomes are attained. Describe the level of achievement of each Program Outcome. Discuss what evidence will be provided to the evaluation team that supports the levels of achievement of each Program Outcome>>**

d. Professional Component
⇒ <<Describe how students are prepared for a professional career and further study in the discipline through the curriculum and indicate how the curriculum

is consistent with the Program Educational Objectives and Program Outcomes>>

⇒ <<Provide evidence that the minimum credit hours and distribution and summarize the process that ensures that each graduate completes all the graduation requirements for the program>>

⇒ <<Describe the culminating major design experience, including how it is based on the knowledge and skills acquired in earlier course work and how appropriate engineering standards and multiple realistic constraints are incorporated in the experience>>

⇒ <<Demonstrate that adequate time and attention are given to each curricular component, consistent with the outcomes and objectives of the program and the institution>>

⇒ <<Describe the provisions for any cooperative education that is used to satisfy curricular requirements. Include a description of the academic component evaluated by program faculty>>

⇒ <<Describe the additional materials that will be available for review during the visit to demonstrate achievement related to this criterion>>

{{Attach a flow chart showing the prerequisite structure of program's courses required or allowed towards the major.}}

{{Attach course syllabi in Appendix A for each course used to satisfy the mathematics, science, and discipline-specific requirements required by the professional component or any applicable Program Criteria. The syllabi formats should be consistent for each course, must not exceed two pages per course, and, at a minimum, contain the following information:

Department, number, and title of course
Designation as a Required or Elective course
Course (catalog) description
Prerequisites
Textbook(s) and/or other required material
Course learning outcomes / expected performance criteria
Topics covered
Class/laboratory schedule, i.e., number of sessions each week and duration of each session
Contribution of course to meeting the program outcomes
Relationship of course to Program Outcomes
Person(s) who prepared this description and date of preparation}}

Table 1-1 Curriculum

(Name of Program)

Year; Semester or Quarter	Course (Department, Number, Title)	Category (Credit Hours)			
		Math & Basic Sciences	Engineering Topics *Check if Contains Significant Design (✓)*	General Education	Other
			( )		
			( )		
			( )		
			( )		
			( )		
			( )		
			( )		
			( )		
			( )		
			( )		
			( )		
			( )		
			( )		
			( )		
Add rows as needed to show all courses in the curriculum.					
TOTALS-LABE BASIC-LEVEL REQUIREMENTS					
OVERALL TOTAL FOR DEGREE					
PERCENT OF TOTAL					
	Minimum percentage	25%	50 %		

Note that instructional material and student work verifying course compliance with LABE criteria for the categories indicated above will be required during the campus visit.

Table 1-2. Course and Section Size Summary

<<Name of Program>>

Course No.	Title	Responsible Faculty Member	No. of Sections Offered in Current Year	Avg. Section Enrollment	Lecture[1]	Laboratory[1]	Other[1]

[1] Enter the appropriate percent for each type of class for each course (e.g., 75% lecture, 25% laboratory).

e. Assessment Process

⇒ << Describe the process by which the stated objectives are continually assessed to ascertain the level to which they are attained and updated to ensure conformity with the needs of the program's various constituencies>>

⇒ << Describe the process to assess the level of attaining the learning outcomes and to show how the assessment results are used and decisions made and actions taken to improve the program so that the outcomes are better attained>>

2. Students

a. **Quality of Admission and Transfer Policies**
<<Summarize the process of admission, acceptance guidelines, and transfer policies. Complete and include Table 2-1 and Table 2-2 >>

b. **Performance Monitoring & Evaluation**
<<Summarize the process by which students' performance (grading policies, probation and suspension rules, etc.) is continuously assessed and monitored and how it is communicated to students>>.

c. **Mentoring, Advising, & Counseling**
<<Summarize the process by which students are advised and counseled regarding curricular and career matters>>

d. **Student Life**
<<Summarize how the program promotes and sponsors the formation of professional, cultural, social, and athletic student organizations>>.

Enrollment and Graduation Trends
<<Summarize the enrollment and graduation trends for the past five years>>

Graduation Requirements
<<Summarize the process for ensuring that each graduate completes all the graduation requirements for the program>>

Table 2-1. History of Admissions Standards for First-Year Admissions for Past Five Years

• Academic Year	Number of New Students Enrolled

Table 2-2. Transfer Students for Past Five Academic Years

• Academic Year	Number of Transfer Students Enrolled

Table 2-3. Enrollment Trends for Past Five Academic Years

	Year (Current-4)	Year (Current-3)	Year (Current-2)	Year (Current-1)	Year (Current)
Full-time Students					
Graduates					

Table 2-4. Program Graduates
(For Past Five Years or last 25 graduates, whichever is smaller)

Numerical Identifier	Year Matriculated	Year Graduated	Prior Degree(s) if Master Student	Certification/ Licensure (If Applicable)	Initial or Current Employment/ Job Title/ Other Placement
1					
2					
3					
4					
n					

(NOTE: LABE recognizes that current information may not be available for all students)

3. Faculty

<<Identify the person who has leadership responsibilities for the program. Describe the leadership and management responsibilities of that person >>

a. Faculty size

<<Describe the composition, size, rank, experience, and workload of the faculty that supports this program; discuss the adequacy of the size of the faculty and describe the extent and quality of faculty involvement in interactions with students, student advising, service activities, and professional development. Complete and include Tables 3-1 and 3-2>>

b. Faculty Competency

<<Describe the qualifications of the faculty and how they are adequate to cover all of the curricular areas of the program>>

c. Faculty Research

<<Summarize the research activities of the Faculty members and discuss how the research is affecting the instruction>>.

d. Faculty Responsibilities

i. Faculty/student interaction

<<Describe how Faculty accommodates adequate interactions with students through advising, counseling, and supervision of students' projects and extracurricular activities>>.

ii. Faculty/Industry Interaction

<<Describe the level of interaction of Faculty with industrial and professional practitioners and prospective employers>>

iii. Continuous Development

<<Describe how Faculty members are involved in continuous professional development activities>>

iv. Faculty Authority

<< Describe Faculty authority to ensure the proper guidance of the program and to develop and implement processes for the evaluation, assessment, and continuing improvement of the program, its educational objectives and outcomes>>.

{{Attach as Appendix B an abbreviated resume for each program faculty member with the rank of instructor or above. The format should be consistent for each resume, must not exceed two pages per person, and, at a minimum, must contain the following information:

Name and academic rank
Degrees with fields, institution, and date

Number of years of service on this faculty, including date of original
   appointment and dates of advancement in rank
Other related experience, i.e., teaching, industrial, etc.
Consulting, patents, etc.
States in which professionally licensed or certified, if applicable
Principal publications of the last five years
Scientific and professional societies of which a member
Honors and awards
Institutional and professional service in the last five years
Percentage of time available for research or scholarly activities
Percentage of time committed to the program}}

Table 3-1. Faculty Workload Summary

<<Name of Program>>

Faculty Member (name)	FT or PT[4]	Classes Taught (Course No./Credit Hrs.) Term and Year[1]	Total Activity Distribution[2]		
			Teaching	Research/Scholarly Activity	Other[3]

[1] Indicate Term and Year for which data apply (the academic year preceding the visit).

[2] Activity distribution should be in percent of effort. Members' activities should total 100%.

[3] Indicate sabbatical leave, etc., under "Other."

[4] FT = Full Time Faculty   PT = Part Time Faculty

Table 3-2. Faculty Analysis

<<Name of Program>>

Name	Rank	Type of Academic Appointment TT, T, NTT	FT or PT	Highest Degree and Field	Institution from which Highest Degree Earned & Year	Years of Experience			Professional Registration/ Certification	Level of Activity (high, med,			
						Govt./Industry Practice	Total Faculty	This Institution		Professional Society	Research	Consulting/Summer	Work in Industry

Instructions: Complete table for each member of the faculty of the program. Use additional sheets if necessary. Updated information is to be provided at the time of the visit. The level of activity should reflect an average over the year prior to visit plus the two previous years.

Column 3 Code: TT = Tenure Track   T = Tenured   NTT = Non Tenure Track

4. Facilities

- **Space**

  <<Summarize the availability of facilities dedicated to the program and indicate how adequate they are for supporting the educational objectives and outcomes of the program>>

  <<Discuss the following

  - Offices (Administrative, Faculty, Clerical, Teaching Assistants)
  - Classrooms and multimedia
  - Laboratories and their adequacy to support hands-on skills development
  - Library to support the scholarly activities of students and faculty >>

- **Resources and Support**
  <<Describe the IT resources, hardware and software used for instruction. Specify any limitations that impact the student's ability to achieve the program's outcomes and the faculty's teaching and scholarly activities>>

  <<Describe the laboratory equipment planning, acquisition, and maintenance processes and their adequacy>>

  <<Describe the type and number of support personnel available to install, maintain, and manage departmental hardware, software, and networks>>

  <<Describe the type and number of support personnel available to install, maintain, and manage laboratory equipment>>

- **Major Instructional and Laboratory Equipment**
  <<List major instructional and laboratory equipment and attach as Appendix C>>

5. Institutional Support

5. **Continuous improvement**
   <<Describe the institutional commitment to the continuous improvement of the program>>

6. **Leadership**
   <<Describe the level of leadership to ensure that the program meets stated program objectives and learning outcomes that are in line with the mission of the institution,

7. **Adequacy and continuity of financial resources**
   <<Describe the process used to establish the program budget and its sources, and provide evidence of adequacy and continuity of institutional support for the program in the following areas: recruitment, retention, and development of faculty, learning facilities, equipment, and research>>.

8. **Adequacy of Services**
   <<Describe the sufficiency of resources to acquire, maintain, and operate facilities and equipment and supports adequate students' life appropriate for the program>>

9. **Career planning and placement**
    <<Describe the adequacy of support for students' exposure to current engineering practices, training experience, career placements >>

10. **Adequacy of Support Personnel**
    <<Describe the adequacy of support personnel necessary to meet program including secretarial support and technicians to maintain the labs and IT infrastructure>>

PROGRAM SPECIFIC CRITERIA

<<Describe how the program satisfies any applicable Program Criteria. If already covered elsewhere in the Self-Study Report, provide appropriate references>>

APPENDIX A – COURSE SYLLABI

APPENDIX B – FACULTY RESUMES
(Limit 2 pages each)

APPENDIX C – LABORATORY EQUIPMENT

APPENDIX D – INSTITUTIONAL SUMMARY

The institution may employ any means it chooses to represent itself to LABE and the visiting team. Consequently, the references to specific tables in the following are for <u>guidance</u> only. The information may be presented in any manner the institution chooses.

The Institution

<<Name and Address of the Institution>>
<<Name and Title of the Chief Executive Officer of the Institution>>

Type of Control

<<Description of the type of managerial control of the institution, e.g., private-non-profit, private-other, denominational, state, federal, public-other, etc.>>

History of Institution

<<Provide a brief history of the Institution, its origin, and its development>>

Student Body

<<Briefly describe the student body and where the students come from>>

Regional or Institutional Accreditation

<<Name the organizations by which the <u>institution</u> is currently accredited and the dates of initial and most recent accreditation evaluations>> if applicable

Personnel and Policies

<<Summarize the following elements

- The promotion and tenure system
- The process used to determine faculty salaries
- Faculty benefits>>

Educational Unit

<<Describe the educational unit (see General Instructions). Describe the administrative chain of responsibility from the individual responsible for the program to the chief executive officer of the institution. Include names and titles. An organization chart may be included>>

Credit Unit

<<It is assumed that one semester credit normally represents one class hour or

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three laboratory hours per week. One academic year normally represents at least 28 weeks of classes, exclusive of final examinations. If other standards are used for this program, the differences should be indicated.

Further, in cases where the Criteria specify curricular content in terms of years, the credit equivalent of one year is determined by dividing the number of credits required for graduation by the nominal length of the program in years. For example, if a five-year bachelor's program requires 150 credit hours for graduation, then 150/5 = 30 is the number of credit hours equivalent to one year>>

Instructional Modes

<<If modes other than traditional on-campus instruction are employed in any programs, the additional modes of instruction should be listed and described in relation to the applicable programs. The institutional and/or unit policies under which the alternate modes are offered should be summarized>>

Grade-Point Average

<<Indicate the grade-point average required for graduation. If there are differences in requirements among the regular and alternative instructional modes, please explain>>

Academic Supporting Units

<<Provide information about units that teach courses required by the programs being evaluated, e.g., mathematics, physics, etc. Include names and titles of the individuals responsible for these units>>

Non-Academic Supporting Units

<<Provide information about units that provide non-academic support to the programs being evaluated, e.g., library, computing facilities, placement, tutoring, etc. Include names and titles of the individuals responsible for these units>>

Faculty Workload

<<Describe the faculty workload policy. Define what constitutes a full-time load>>

Tables

{{The tables that follow are simply a guide and are not required in the Self-Study Report. All are optional. The institution is encouraged to employ any means it chooses to represent itself to LABE and the visiting evaluation team.}}

Table D-1. Degrees Awarded and Transcript Designations by Educational Unit

Program Title[1]	Name of Degree Awarded[2]	Designation on Transcript[3]

Complete the table for all programs, as follows:

[1] Give the program title as officially published in catalog.
[2] List degree awarded for each mode offered. If different degrees are awarded, list on separate lines.
[3] Indicate how the program is listed on transcript for each mode offered. If different designations are used, list on separate lines.

Table D-3. Support Expenditures
{{This table should be completed for the Educational Unit and for each program being evaluated}}

<<Name of Educational Unit or Program>>

Fiscal Year	(previous year)[1]	(current year)[2]	(year of visit)[3]
Expenditure Category			
Operations (not including staff)[4]			
Travel[5]			
Equipment[6]			
(a) Institutional Funds			
(b) Grants and Gifts[7]			
Graduate Teaching Assistants			
Part-time Assistance[8] (other than teaching)			
Faculty Salaries			

   Report Department Level and Program Level data for each program being evaluated. Updated tables are to be provided at the time of the visit.

[1] Provide the statistics from the audited account for the fiscal year completed year prior to the current fiscal year.

[2] This is your current fiscal year (when you will be preparing these statistics). Provide your preliminary estimate of annual expenditures, since your current fiscal year presumably is not over at this point.

[3] Provide the budgeted amounts for your next fiscal year to cover the term when the LABE team will arrive on campus.

[4] Categories of general operating expenses to be included here.

[5] Institutionally sponsored, excluding special program grants.

[6] Major equipment, excluding equipment primarily used for research. Note that the expenditures (a) and (b) under "Equipment" should total the expenditures for Equipment. If they don't, please explain.

[7] Including special (not part of institution's annual appropriation) non-recurring equipment purchase programs.

[8] Do not include graduate teaching and research assistant or permanent part-time personnel.

Table D-4. Personnel and Students

{{This table should be completed for the Educational Unit and for each program being evaluated}}

<<Name of Educational Unit or Program>>

Year[1]: _____

	HEAD COUNT		FTE[2]	RATIO TO FACULTY[3]
	FT	PT		
Administrative[4]				
Faculty (tenure-track)				
Other Faculty (excluding student Assistants)				
Student Teaching Assistants				
Student Research Assistants				
Technicians/Specialists				
Office/Clerical Employees				
Others[5]				
Undergraduate Student enrollment[6]				
Graduate Student enrollment				

Report data for the program unit(s) and for each program being evaluated.

1   Data on this table should be for the fall term immediately preceding the visit. Updated tables for the term when the LABE team is visiting are to be prepared and presented to the team when they arrive.

2 For student teaching assistants, 1 FTE equals 20 hours per week of work (or service). For undergraduate and graduate students, 1 FTE equals 15 semester credit-hours (or 24 quarter credit-hours) per term of institutional course work, meaning all courses — science, humanities and social sciences, etc. For faculty members, 1 FTE equals what your institution defines as a full-time load.

3   Divide FTE in each category by total FTE Faculty. <u>Do not</u> include administrative FTE.

4   Persons holding joint administrative/faculty positions or other combined assignments should be allocated to each category according to the fraction of the appointment assigned to that category.

5   Specify any other category considered appropriate, or leave blank.

6   Specify whether this includes freshman and/or sophomores.

[1] FTE = Full-Time Equivalent

Table D-5. Program Enrollment and Degree Data
{{This table should be completed for the Educational Unit and for each program being evaluated}}

<<Name of Educational Unit or Program>>

	Academic Year	Enrollment Year					Total Undergrad	Total Grad	Degrees Conferred	
		1st	2nd	3rd	4th	5th			BS (BE)	MS
CURRENT										
1										
2										
3										
4										
5										

Give official fall term enrollment figures (head count) for the current and preceding five academic years and undergraduate and graduate degrees conferred during each of those years. The "current" year means the academic year preceding the visit.

Table D-6. Faculty Salary Data[1]

{{This table should be completed for the Educational Unit and for each program being evaluated}}

<<Name of Educational Unit or Program>>

Academic Year _____

	Professor	Associate Professor	Assistant Professor	Instructor
Number				
High				
Mean				
Low				

[1] If the program considers this information to be confidential, it can be provided only to the Team Chair.