Proposal for accreditation of pharmacy careers in Latin America

VIII Pan American Conference on Pharmaceutical Education (CPEF)

(Final version with recommendations and modifications from the VIII CPEF)
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Conflict of interest statement

None of the members of the Working Group for the Proposal for Accreditation in Latin America has any conflicts of interest, whether financial or of another nature.
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Executive summary

According to global forums, accreditation is the most widely used quality assurance method in education. Accreditation is the result of a process whereby a governmental, state-owned, or private entity – known as an accreditation, or accrediting, body – evaluates the quality of an institution of higher education as a whole, for the purpose of formally and publicly recognizing that said institution fulfills previously established criteria or standards and granting a seal of approval.

The impact of pharmacy education on the health of a country makes universities commit all of their efforts to the purpose of achieving the best education for their graduates, particularly when society demands greater commitment from professionals and when universities should show a greater commitment to society. At this point where needs converge, accreditation ensures a specific level of quality in accordance with the mission of the institution, the objectives of the program, and the expectations of the various players involved, including students and employers. Accreditation based on standards specific to the pharmacy career is the path to obtaining the quality that this career requires, as it enables targeting of resources and actions toward the indicators that will have the greatest impact on this career, distinguishing them from those specific to other health careers.

The contextualization presented herein provides a notion of the status of accreditation in each country of the Region and could serve as an input to ascertain the work that remains to be done in each nation.

The present document describes the principles of the accreditation system, i.e., the cornerstones on which the accreditation process is built (some writings define these as criteria, but we prefer to define them as characteristics or principles, so as to distinguish them from the meaning of “criterion” as a subcategory of components); describes the stages of the accreditation process, which are common to all countries; and proposes specific dimensions, components, criteria, indicators, and standards for the pharmacy career undergraduate education as a way of contributing to the efforts that each country has carried out in this field and recommending that accreditation should take into account the context of the national higher education system.

It bears stressing that, in the globalized economy, the use of similar quality standards for the accreditation of pharmacy careers is important for mutual recognition of professional qualifications, which enables institutional, national, and regional mobility among students.

Again, the hard work of the participating representatives of the countries of the Region should be regarded as a proposal for each country, based on the argument that accreditation should be contextualized.
1. Background

Definition and purposes of accreditation

*Accreditation* refers to the assurance of the quality of a curriculum or career in relation to standards established by the Ministry of Education or pertinent agency of each country.

Accreditation as a process implies an analysis of the ability of the academic institution to educate, its academic resources, its administrators, its infrastructure, and its management, with regard to its efficiency in meeting the targets and goals of the program or career\(^1\).

Canadian and U.S. documents define accreditation as “*the public recognition accorded to a professional program that meets established professional qualifications and educational standards through initial and periodic evaluation. Accreditation concerns itself with both quality assurance and program enhancement. It applies to programs and is to be distinguished from certification or licensure, which applies to individuals*” \(^2\)\(^(3)\).

Unlike institutional accreditation, the purpose of which is to evaluate mechanisms that ensure the quality and operation of a given institution, career or program accreditation focuses on the evaluation of careers or programs in accordance with defined purposes and established standards.

The process of accreditation of pharmacy programs or careers seeks to establish a balanced, professional judgment on the quality of pharmacy programs and foster their improvement. This process provides quality assurance and continuous enhancement of programs \(^3\).

In this regard, Canada goes even further and introduces the concept of *competencies*, setting forth that the principal objective of a Pharmacy program is the preparation of graduates *competent* in pharmaceutical care, as defined by Hepler and Strand\(^4\). Pursuant to the foregoing, the pharmacist should play an active role in helping patients achieve a satisfactory state of health, acting particularly on aspects related to the adequate use of medicines. Furthermore, the pharmacist should contribute to decision-making in health programs to ensure their effectiveness and the involvement of the community itself in improving the health of the population.

As a result, accreditation provides:

- A means of identifying which programs or careers meet established quality requirements, by means of standardization and evaluation of parameters;
- An assurance that professional practice meets common minimum expectations;
- A guarantee to students that their curriculum or career corresponds to accreditation requirements and, as a result, provides the proper competency level for their training

Furthermore, for the academic institution undergoing this process, accreditation constitutes a form of self-analysis that produces an evaluation of the institution’s strengths and weaknesses for the purpose of overcoming them and, in addition, takes into account external peer involvement in the process of verifying whether the educational objectives established by the unit are being achieved. Occasionally, in some countries, it may also be an element taken into account for purposes of resource allocation, such
as the granting of subsidies and fellowships to students, although reasonable objections to this use can be raised.

If accreditation seeks to evaluate and create quality and continuous improvement, the definition of this concept must also be discussed. Quality is often defined in relation to a series of parameters: basic training, specific training, problem-solving ability, researcher scientific output, student performance, etc. However, in the opinion of some authors, the debate on quality includes not only references to the attainment of educational objectives and to the scientific/academic performance of educators and students, but also elements of other commitments, such as the relevance of curricula(6). This term has gained great importance in some countries, including in the evaluation of scholarly research, giving rise to the concept of curriculum relevance.

Some authors have advanced the notion of quality as a function of the extent to which effectiveness, efficiency, relevance, importance, and equity requirements are met(6). In this sense, a document published by the National Accreditation Commission of Colombia (CNA) provides a broad introduction to the meaning of quality and its evaluation(7), and notes that “on studying the literature and observing the experiences of other countries with regard to quality evaluation, one finds that, in many cases, models based on only one of its constituent aspects are used”. Thus, for example, “quality [is deemed to exist] at an institution by virtue of its reputation, or is assumed to be present when [the institution] has the proper academic or financial resources, or because it has obtained certain results in some of its core functions, or for the intrinsic value of the academic content of its curricula, or even by the value added by the education it provides, i.e., by what students learn during their years at the institution”. In other cases, quality is identified as the extent to which standards set by professional associations or by accreditation bodies are met, or by the degree of satisfaction manifested by employers. Strategies and methods for quality evaluation are chosen on the basis of such preferences, which thus limit the breadth of the concept of quality and the scope of the results of quality evaluation. In comparison to these partial approaches, the National Board of Accreditation of Colombia adopted a comprehensive definition for the development of its model, trying “to take into account all factors that affect [quality] and the manner in which institutional resources, internal processes, and the results of academic management weigh on the configuration of these factors”(7).

Existing regional tendencies on the consensus definition of curricula and accreditation of careers also warrant mention. The signature of the so-called Bologna Declaration(8) by 31 Ministers of Education of Europe in June 1999 constitutes a milestone in that it introduced the discussion of higher education and its quality to Europe and defined objectives for work. Some of the characteristics promoted were the compatibility, mobility, transparency, and flexibility of education programs. In light of this Declaration, several subsequent meetings of ministers have been held, the participants of which have worked intensely toward the implementation of changes in their educational systems.

Also worthy of note is the European Union–Latin America–Caribbean Ministerial Conference on Higher Education, held in Paris in November 2000, which adopted a Declaration that supports activities for cooperation and harmonization in the field of higher education(9).

A closer regional experience, although with very different characteristics and more specific objectives, is the Experimental Mechanism of Accreditation (Mecanismo Experimental de Acreditación, MEXA) set up by MERCOSUR, to which later paragraphs will refer.
2. The situation in the Americas

In terms of organization and systems, in the United States and Canada, higher education in general – and pharmacy education in particular – is based on a different framework than elsewhere in the Americas. The first educational standards in the United States were published as early as 1937, prior to the advent of accreditation processes. In 1989, a review was started of the documents that would become the Accreditation Standards and Guidelines for pharmacy programs, which came into effect in 1997. The guidelines of both countries have provided a reference for U.S. schools of pharmacy and their curricula.

In the other countries of the Americas, the situation of higher education in general is diverse and heterogeneous, to the extent that, in many cases, the relationship between undergraduate and graduate-level programs is not clearly defined; doctoral, master’s, and specialization programs may constitute standalone offerings, with sometimes overlapping contents and lacking any organizational scheme. Another element to take into account is increased enrollment in institutions of higher education, particularly universities. According to a study conducted by Brunner in 2000, the number of university students in Latin America rose from 600,000 in 1960 to more than 8 million in 1995[10]. Although the dissemination of higher education is recognized as a positive achievement that has allowed greater access to tertiary-level studies, in parallel with and as a result of this phenomenon, a massive proliferation of public and private universities of varying quality took place in the same period. Over the course of nearly 40 years, the number of universities in Latin America increased from 75 to 812, of which 493 were private. Furthermore, this phenomenon occurred in the midst of complex socioeconomic situations of countries, and thus was not accompanied by the necessary resources that would have supported the required changes and helped ensure high-quality academic programs. In the particular case of pharmacy careers, an additional element has contributed to a further increase in existing heterogeneity. To this day, the profile of pharmacy programs shows differences among different countries; as a result, different titles are granted by programs in different countries. By way of example, countries such as Costa Rica and Argentina grant the title of Pharmacist (Farmacéutico), Chile confers the title of Pharmaceutical Chemist (Químico Farmacéutico), whereas Mexico grants the title of Pharmacobiology Chemist (Químico Fármaco-Biólogo).

Notably, the differences observed in educational systems, criteria for admission, and accreditation processes have generated controversies regarding the recognition and revalidation of academic titles among different countries; this issue has even been the object of regional agreement committees, such as in MERCOSUR.

3. Historical notes on career evaluation and accreditation in the Americas

Argentina

The National Committee for University Evaluation and Accreditation (Comisión Nacional de Evaluación y Acreditación Universitaria, CONEAU) is a decentralized agency that operates under the jurisdiction of the Ministry of Education. CONEAU, established in 1995 under Higher Education Law No. 24,521, has as one of its functions the accreditation of professional careers (i.e., those granting titles corresponding to State-regulated occupations).
The accreditation process includes the conduction of a self-evaluation of the career, followed by an external evaluation, which includes a visit by a committee of peers and a subsequent report. CONEAU takes into account this report, as well as any notes made by the institution and the commitments it makes to overcoming any deficiencies detected. Accreditation is valid for a maximum of 6 years, depending on the degree of compliance with established requirements. A career that does not reach a minimum level of quality is not accredited.

The first cycle of accreditation of the pharmacy career in Argentina, which began in 2005 with a voluntary call followed by a mandatory one, ended in 2011 with the completion of the second stage. The basis for this process was a document, approved by the Ministry of Education with the agreement of the Council of Universities, that included basic curricular contents, a minimum student workload, criteria for practical training, and standards for accreditation of the pharmacy career. As a result of this process, the pharmacy programs of 11 public and seven private universities were accredited.

**Bolivia**

Bolivia has a National Council for Quality Assurance of Higher Education (Consejo Nacional para el Aseguramiento de la Calidad de la Educación Superior, CONAES); although a law exists, it has yet to be implemented. The role of CONAES as a quality assurance body is fulfilled by a committee named by the Ministry of Education.

**Brazil**

In 1995, the Anísio Teixeira National Institute for Educational Studies and Research (Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, INEP) was restructured to support decision-making on educational policies and strengthen the process of dissemination of educational information. The National Higher Education Assessment System (Sistema Nacional de Avaliação da Educação Superior, SINAES) was established under the auspices of INEP.

Initially, the SINAES was responsible for authorizing and recognizing the programs offered by institutions of higher education, the conditions of university facilities, and the scenario in which the educational process takes place and to analyze the socioeconomic reality of students and their opinions on their learning settings, in addition to conducting a nationwide examination of all programs, a task that was carried out from 1996 to 2003. Based on the results of this examination, institutions of higher education were classified in descending order, from best to worst. Any program deemed deficient on more than one occasion was at risk of being shut down by the Ministry of Education and Culture.

In 2004, institutional evaluation was established as the linchpin of university reform, which is based on three pillars: evaluation of institutions, evaluation of curricula, and evaluation of student performance. The evaluation process takes into account such issues as the teaching/learning process, research, extension, the social responsibility of universities, management, and faculty. Responsibility for coordination of the SINAES was transferred to the National Committee for Evaluation of Higher Education (Comissão Nacional de Avaliação da Educação Superior, CONAES). In turn, the INEP is in charge of carrying out evaluations. Sanctioning and closure of underperforming programs remains a challenge.

**Chile**
From March 1999 to October 2006, the accreditation process was the purview of the National Undergraduate Accreditation Committee (Comisión Nacional de Acreditación del Pregrado, CNAP) which has the purpose of promoting and attesting the quality of higher education programs.\(^{(12)}\)

Within the framework of the new Higher Education Quality Assurance Law (No. 20,129), the National Accreditation Committee (CNA-Chile) was established in November 2006. A public and autonomous agency, the CNA is tasked with confirming and promoting the quality not only of institutions of higher education, but also of the careers and programs offered by these institutions.\(^{(13)}\)

The accreditation of professional careers and graduate programs can be carried out not only by CNA-Chile, but also by other national, foreign, or international accrediting bodies that have been authorized to do so in accordance with the standards set by Law No. 20,129. Accreditation is carried out in relation to the purposes declared by the accrediting institution and the national and international standards of each profession or discipline, and taking into account the respective academic development project.

The accreditation of professional careers and graduate programs can be granted for a period of up to 7 years, depending on the degree of compliance with the criteria for evaluation. A program that does not meet the minimum quality standards will not be accredited.

The choice to undergo this process is and always has been voluntary; however, resource allocation by the State is increasingly being tied to compliance with publicly confirmed quality standards.

**Colombia**

Colombia has a National Accreditation System (Sistema Nacional de Acreditación, SNA). Accreditation uses a mixed model, comprising government components and the universities themselves.\(^{(14)}\) Although self-evaluation and external verification have been carried out since 1984, accreditation proper was only established in 1992.

The National Accreditation Council (Consejo Nacional de Acreditación, CNA), an advisory and sectoral coordination body of the Ministry of National Education (MEN), evaluates institutions, careers, and graduate programs; it intervenes in the creation of any institution and in the approval of programs and designates external evaluators. The process offers two types of accreditation: “pre-accreditation” and “accreditation of excellence.” The former applies to some programs deemed to be of high social impact, for which it is mandatory, and is based on minimum requirements. The latter refers to a voluntary system whereby self-assessment of programs and institutions and the achievement of objectives are promoted as a means of quality enhancement. Pharmacy programs have been accredited in the excellence modality.

The main stages of the process are self-assessment, external evaluation by means of peer visits to academic facilities, a final report, and a plan for improvement. Finally, the MEN issues a “resolution of accreditation”, which establishes the duration of the accreditation period, lists the core strengths of the program, and makes recommendations for enhancement and maintenance of program quality.\(^{(15)}\)

Currently, the pharmacy programs of Colombia are at different stages of accreditation. There are reaccredited programs, some still in their first accreditation periods, and others carrying out the self-assessment process. These high-quality accreditations were granted by the MEN. The process was carried out as per the “Guideline for self-assessment for purposes of undergraduate program accreditation”, prepared by the CNA,\(^{(16)}\) on a voluntary basis, by the initiative of the universities.
Costa Rica

In 1984, a career evaluation system was implemented, which essentially covered those programs of public universities that had the endorsement of the National Council of Rectors (Consejo Nacional de Rectores, CONARE). In 1998, the Council set up the National System for Accreditation of Higher Education (Sistema Nacional de Acreditación de la Educación Superior, SINAES), whose purpose is to promote and attest the quality of the programs of institutions of higher education, both public and private. It is funded by contributions from public and private universities and by its own earnings.

Accreditation is voluntary and applies to careers or programs, not to schools or other academic institutions. The purpose is to achieve academic excellence, inform and guide society, and certify the quality of programs.

The stages of the accreditation process are as follows: self-assessment, filing, payment of a “right to accreditation” fee, an evaluation by peers designated by SINAES (two of the members of the peer committee must be foreigners), and the final decision to accredit, which is made by SINAES. When deciding whether to accredit, the System takes into account the peer report, the documentation provided by the program, its history, and any notes made by the program to the external evaluators’ report. Accreditation is valid for up to 4 years, and reaccreditation, for up to 6 years.

In the field of pharmacy, there are one accredited and two reaccredited programs. There are five schools of pharmacy in the country.

Cuba

Accreditation of university programs is carried out by a National Board of Accreditation (Junta Nacional de Acreditación) made up of 28 Cuban members.

Guatemala

Pharmacy programs grant the degree of Licentiate in Chemistry and Pharmacy. The self-evaluation process follows the format established by the Central American University System and the Central American System for Evaluation and Harmonization of Higher Education (SUCA-SICEVAES).

Jamaica

In 1995, the Bachelor in Pharmacy career was established, with a duration of 5 years (4 years at university and a 1-year internship). In 2006, the career was changed to a Master’s Degree in Pharmacy, accredited by the Pharmacy Council of Jamaica. As established by law in 1987, this body regulates careers in five areas. Initially, presentation to the Pharmacy Council for accreditation was voluntary, but currently, the university requires that all programs be accredited. The procedure consists of applying to the Council and filing the self-evaluation document. The Council subsequently sets the date for an inspection by a committee of eight external peer evaluators who will visit the institution for 2 to 3 days. At the end of this period, the Council will deliver its verdict. When applicable, the academic program must submit a proposal to address any weaknesses found.

Accreditation is granted on the basis of a favorable evaluation of the program by the Council, based on the submitted documentation and on the peer inspection. After granting of accreditation, the program must submit annual reports on its advances toward fulfillment of the commitments made in the
improvement plan. Accreditation remains in effect as long as commitments to improvement are met within the time frame established by the accrediting body.

**Mexico**

In 1989, the National Coordination for Higher Education Planning (*Coordinación Nacional para la Planeación de la Educación Superior, CONPES*) created the National Committee for Higher Education Assessment (*Comisión Nacional de Evaluación de la Educación Superior, CONAEVA*), which promotes self-evaluation of public higher education institutions and prepares quality standards. In 1991, the Interinstitutional Committees for Higher Education Assessment (*Comités Interinstitucionales para la Evaluación de la Educación Superior, CIEES*) were created for the purpose of carrying out diagnosis and external evaluation of programs, their administration, and the management of higher education institutions. In 2000, an agency for the quality enhancement of higher education was created: the Council for the Accreditation of Higher Education (*Consejo para la Acreditación de la Educación Superior, COPAES*), an entity recognized by the Federal Government and that confers recognition to accrediting bodies\(^{(21)}\).

The accreditation process is voluntary and can be requested to accrediting bodies recognized by COPAES; its objective is to ensure the quality of programs and institutions, while providing information in this regard to society. The stages of the process are: self-evaluation, preparation of a self-evaluation report and submission thereof to the accrediting body, inspection by external evaluators and a subsequent opinion. This opinion can give rise to direct accreditation, conditional accreditation (conditioned to meeting certain recommendations within a set time frame), or denial of accreditation.

**Nicaragua**

In 2006, the Education Law created the National Board for Evaluation and Accreditation of the National Educational System (*Consejo Nacional de Evaluación y Acreditación del Sistema Educativo Nacional, CNEA*), which was implemented in 2007. Training of peer evaluators is carried out through SICEVAES, the agency responsible for program accreditation\(^{(20)}\).

**Panama**

As in Guatemala and Nicaragua, the self-evaluation process of undergraduate programs follows the SICEVAES format\(^{(20)}\). Evaluation is not punitive in nature, but rather recognizes the achievements of each program.

**Paraguay**

Paraguay has a national accrediting body, the National Agency for Evaluation and Accreditation of Higher Education (*Agencia Nacional de Evaluación y Acreditación de la Educación Superior, ANEAES*), created by law in 2003. It operates under the Ministry of Education and Culture, but has technical and academic independence to perform its functions, which are\(^{(22)}\):

- To produce technical reports on academic programs and institutions, at the request of the competent higher education authority.
- To serve as an advisory body for evaluation and accreditation activities related to higher education.
• To serve as an advisory body at the request of institutions or agencies interested in matters related to the present law and within the limits of its jurisdiction.
• To accredit the academic quality of careers and graduate-level programs that have undergone external evaluation by the Agency.
• To disseminate to the public, in timely fashion, information on accredited programs.
• To form ties with national or foreign organizations for financial or technical cooperation.

To promote continuous improvement of institutions of higher education, in November 2009, Diagnostic Evaluation was established as a mandatory process to which all programs that grant graduate degrees and have not yet had any graduating classes. ANEAES is the body that confers accreditation for the granting of said degrees pursuant to the current legislation.

Accreditation is valid for a minimum of 2 years, with plans for improvement, and a maximum of years.

**Peru**

Experiences with accreditation essentially comprise the processes carried out by the National Council for University Accreditation (Consejo Nacional de Acreditación de Universidades, CONAFU)

The latter has implemented a process that seeks to assure the quality of medical careers and implement any corrections necessary to achieve this. Other initiatives are being developed within the National Assembly of Rectors, the Consortium of Universities (private sector), and the Alliance of Universities (public sector).

**United States**

The evaluation system in place for the Pharmacy degree (currently the PharmD) does not provide for direct government involvement, although the results of the accreditation process are taken into account for allocation of subsidies. The government devolves accrediting authority to an accreditation body composed of representatives from various entities and is responsible for assuring the quality of services.

There are six regional accreditation agencies, each of which sets its own criteria for accreditation of pharmacy careers or university programs. There is also a national accreditation body, the Accreditation Council for Pharmacy Education (ACPE), which establishes common standards for all pharmacy careers in the country.

The accreditation process is voluntary and takes place every 6 years. It takes into account the results of a self-evaluation carried out by the program and of a subsequent external peer review, which generates an opinion. The Council then weighs the self-evaluation report, the external evaluation report, and any comments made by the program in response to the external evaluation report. The evaluation itself emphasizes the achievement of objectives, and both the evaluation and accreditation proper focus on quality enhancement and assurance with the ultimate goal of training professionals that can ensure the safety of the health of the population.

Professional licensure is granted by Boards of Pharmacy.

**Uruguay**
Uruguay does not have a nationwide accrediting body. Due to the autonomous nature of universities in the country, there are legal obstacles to the creation of such an entity\textsuperscript{26}.

**Venezuela**

Since the university laws of 1970, the need for periodic evaluation of experimental universities has been recognized. Accreditation of graduate-level programs began in 1985. Furthermore, there have been experiences with self-evaluation of some careers, such as some branches of engineering.

The 1999 Constitution provided a legal framework for the operation of the System for Evaluation and Accreditation of National Universities (\textit{Sistema de Evaluación y Acreditación de las Universidades Nacionales}, SEA)\textsuperscript{25} and its two subsystems, namely, the evaluation and accreditation subsystems. The purpose of SEA is to assure quality and to recognize and enhance excellence. The system has a series of indicators that have contributed important statistical data on universities; however, it is still pending complete implementation.

**The experience of MERCOSUR**

At the XXII Meeting of MERCOSUR Ministers of Education, held in June 2002 with the additional presence of Chile and Bolivia, the foundation was laid for a mechanism for regional accreditation of graduate careers. The first career selected was Agronomy, followed by Medicine and Engineering. The so-called Experimental Mechanism of Accreditation of graduate careers (\textit{Mecanismo Experimental de Acreditación de carreras de grado}, MEXA)\textsuperscript{27} requires the submission of an institutional report and a self-evaluation, as well as action by a peer committee that evaluates the report and conducts the necessary interviews and visits.

The titles of accredited careers are valid in all MERCOSUR Member States. This constitutes an unprecedented experience in regional accreditation and, although it initially seemed difficult to implement due to the diversity among members, it has become a powerful initiative that has implemented mechanisms for quality improvement and has a promising agenda.

According to the agreement, the national accrediting body of each country is responsible for carrying out the MERCOSUR procedure, although the mandate of these agencies is not entirely clear, since few are structured in accordance with MEXA requirements.

4. **Proposed accreditation process for pharmacy careers and programs (or similar entities) in Latin America and the Caribbean**

Within the framework of the Pan American Conferences on Pharmaceutical Education, the decision was made to evaluate the possibility of a common proposal for accreditation of pharmacy programs in Latin America.

The V Conference, held in Miami in 2002, established the following as the core aspects of accreditation:

- Each country should have a regular and systematic process to ensure and continuously improve the quality of its pharmacy education programs.
- This process can be governmental or nongovernmental, and should involve the interested parties.
• Each country should have a set of standards they will seek to harmonize with the elements developed by a Pan American/international committee.

Hence, when focusing on a possible proposal containing common elements for the accreditation of pharmacy careers, one should bear in mind that it is possible to lay common groundwork for accreditation in the countries of Latin America and the Caribbean while still respecting autonomy and diversity. This entails overcoming administrative and legal barriers, but will promote work towards high-quality education in an integrated manner.

The purpose of this proposal for accreditation is to seek quality and improvement of pharmacy careers in the countries of Latin America and the Caribbean as an ongoing process.

The present document is the result of a process of discussion and maturation. It was initially discussed and modified with the involvement of the representatives of the participating countries at the Buenos Aires Conference, held in 2004, and disseminated to other participants for preparation of the version that it was presented at the Montevideo Conference, in 2008. Subsequently, an improved document was studied and reviewed at the 2012 Conference, which was held in Cuba. The document presented herein contains the recommendations arising from that meeting.

5. Objectives of accreditation

General objective

To improve the quality of university-level pharmacy education in the various countries of the Americas and the Caribbean, solely with respect to its formative academic aspects. The proposal contained in this document should be implemented in accordance with the legal and regulatory framework of each country.

Specific objectives

1. To foster improvement of programs by identifying their strengths and addressing their weaknesses.
2. To contribute to the achievement of common minimum quality standards in pharmacy education in the different countries.
3. To help participating institutions fulfill their stated missions and purposes.
4. To provide the community with transparent and reliable information on the quality of pharmacy careers.
5. To enhance the importance, impact, and social relevance of pharmacy education programs.
6. To facilitate academic integration by identifying and recognizing university programs of excellence.

The present document will refer to the principles of the accreditation system when referring to the characteristics that form the cornerstones of the accreditation process. Some documents refer to these as criteria, but we prefer the terms characteristics or principles, so as to distinguish them from the concept of “criterion” as a subcategory of components.

The core characteristics to be recognized in this process are the following:
6. Requirements

Careers or programs that decide to voluntarily submit to the accreditation process should meet minimum requirements at each of following sequential stages or procedures that constitute the process:

1. Application
2. Self-evaluation
3. Self-evaluation report (should include a preliminary commitment to improvement)
4. External evaluation

- **Universality**: Knowledge and its assessment are not restricted by geographical location nor by diversity.
- **Ethics**: Knowledge is based on unquestionable human and educational principles and values.
- **Accountability**: The ability to take on and respond adequately to the commitments emanating from the proposed actions and objectives.
- **Suitability**: The quality of meeting the necessary conditions to perform a function and respond to any commitments made, in the required manner and at the required level.
- **Comprehensive analysis**: Assessment of means, processes, factors, and results.
- **Transparency**: The ability to carry out operations, components, and processes without concealing anything.
- **Confidentiality**: The distribution of and access to documents will be restricted. Denied requests will not be made public. Documents should be returned to their institution of origin, i.e., the entire process should be confidential. Confidentiality of peer evaluation. Confidentiality of the process on the part of the university to which the program or career belongs; the institution cannot publicize which stage of the accreditation process it is in.
- **Equity**: Equity is an expression of fairness in operations. It ensures the equality of opportunities on equal terms, respect for merit, nondiscrimination, and non-arbitrariness.
- **Relevance**: Essentially refers to the ability to meet the needs or priorities of the social environment and of the country, while putting forward proposals to improve these.
- **Temporary nature**: This concept refers to the time for which accreditation will be valid. Accreditation is temporary, i.e., its validity is time-bound, limited to a period established by the accreditation body.
- **Voluntary nature**: The choice to undergo accreditation of pharmacy careers and/or programs will be voluntary, at least at first. The requesting institution should manifest in writing its intention to have a career or program accredited. During the conduction of the accreditation process itself, institutional autonomy should be ensured.
- **Academic cooperation**: The system should facilitate and create opportunities for academic cooperation to help programs achieve or surpass the standards set by the competent national organizations.
7. Stages of the accreditation process

1. Application

The Institution of Higher Education should submit a written application to the competent accrediting body requesting that the accreditation process be carried out. To this end, an agreement will be signed between the two parties. The career or program should meet the following basic requirements:

- Be officially recognized by the national educational authority;
- Have graduates.

2. Self-evaluation

This constitutes a presentation by the career or program of an evaluation of the extent to which it has achieved its objectives and its level of compliance with established parameters (standards) of quality. This implies data collection (in a participatory process), analysis, and judgment, and also considers proposals for improvement. A Self-Evaluation Report will be prepared as a result of this procedure.

3. Self-evaluation report

Its objective is to describe basic aspects of the self-evaluation process carried out and present the context in which the career takes place. The report will also include the results of the process in its entirety.

4. Preliminary commitment to improvement

This document career establishes, through an improvement plan, the activities to be carried out with the purpose of mitigating any weaknesses detected during the self-evaluation process. It is a conceptual document and a guide for action in response to requirements, with the purpose of modifying the current state of the career or program, seeking a future in which weaknesses have been overcome and strengths have been enhanced.

5. External evaluation

This evaluation is carried out by a peer committee, on the basis of the self-evaluation report provided by the program, on-site visits, interviews, and other forms that contain qualitative and quantitative information with regard to the career being evaluated. Once the self-evaluation report and any other relevant information have been submitted, the accreditation body will assign a peer committee. This report and the other documents submitted will be taken into account by the peer committee, which should also conduct a visit to the program and its facilities. This activity will allow the external peer committee to establish contact with the
various players of the educational process, i.e., authorities, faculty, students, administrative personnel, graduates, employers, and beneficiaries of the professional practice.

6. **Report of the peer committee**

Within an agreed-upon time frame, the peer committee should deliver a report indicating the degree of compliance with the standards and issue its recommendation with regarding whether the career or program should be accredited and for how long. The report will be sent to the Accreditation Committee or to the agency recognized for this purpose by the Ministry of Education of the country, which should then send it to the authority responsible for the career so it may be made aware of the report and, if desired, appeal any of the observations or conclusions contained therein. Any appeal must be submitted in writing to the Accreditation Committee within a defined deadline.

7. **Opinion of the accrediting body**

The accrediting body will consider the self-evaluation and external peer reports, any appeals filed (if applicable), and all of the other elements that compose the information relevant to the process.

The following options are proposed for the opinion:

- **Accredited**: The career fulfills the proposed quality standards.
- **Accredited with recommendations**: Accreditation is granted as long as certain improvements are made within a given time frame, over a period shorter than the established deadline.
- **Not accredited**: The career does not meet the minimum quality standards and should await 3 years before applying for accreditation again.

8. **Formulation and implementation of an improvement plan**

Programs accredited with recommendations should prepare a plan for the improvement of their operating conditions, a timetable for said work, the person in charge, and the resources assigned for compliance with said plan.

If, during the accreditation period, the career or program carries out significant changes in its structure or operations, such as substantial curriculum modifications, opening of new headquarters in a city or country different from its location of origin, introduction of new teaching modalities (e.g., online or partially programs), or another substantial change related to the direction or administration of the career, these should be reported to the Committee, with a report on the corresponding self-evaluation.

9. **Structure of the evaluation**

Quality will be evaluated by means of a layered approach. This layered organization comprises a hierarchical structure of dimensions, components, criteria, and indicators.
1. **Dimensions**: The broad, distinct areas that make up the entire career; they comprise the components that are evaluated.

2. **Components**: The component parts of each dimension, which have unique characteristics that confer a distinct identity for purposes of analysis. Components provide information on the career concerning the dimension that they constitute.

3. **Criteria**: The qualities or attributes of a component, on the basis of which judgment is issued. They can be essential or supplemental.

4. **Indicators**: The quantitative or qualitative markers that indicate the value or status of a criterion.

5. **Standards**: The parameters that are deemed necessary and satisfactory for the indicators and that are used as a reference. They enable evaluation of the level of compliance with these indicators. They will be established through a consensus with benchmarks for the career, by the Accreditation Committee, or by the accrediting body recognized by the Ministry of Education of the corresponding country.

6. **Sources of information**: All documents that provide necessary and reliable information about indicators.

**Dimensions**

The dimensions to be taken into account, and their constituent components, are as follows:

A. **Institutional Context**:
   - A.1 Institutional profile
   - A.2 Organization, governance, and management
   - A.3 Policies and programs for institutional well-being

B. **Academic Project**:
   - B.1 Curriculum
   - B.2 Teaching-learning process
   - B.3 Technological research and development
   - B.4 Extension and cooperation activities

C. **Human resources**:
   - C.1 Faculty
   - C.2 Student body
   - C.3 Alumni
   - C.4 Support staff

D. **Infrastructure**:
   - D.1 Physical and logistical infrastructure
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D.2 Library resources  
D.3 Laboratories and special facilities  

E. Social and professional integration and alumni follow-up

10. Development of the elements of evaluation

A. INSTITUTIONAL CONTEXT Dimension

A.1 Institutional Profile Component

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
</table>
| 1. The career should be at the university level. | a. Teaching, research, and extension are carried out.  
b. There is official authorization from the highest competent educational authority of higher education. | a. The career is at the university level.  
b. The career is officially authorized by the highest competent educational authority of higher education. |
| 2. The institutional development plan should be evaluated periodically, with the involvement of the university community. | a. Evidence of the existence of an institutional development plan whose evaluation is taken into account for improvements.  
b. Evidence of operation of mechanisms for the participation of the university community in the development and evaluation of the plan. | a. There is an institutional development plan whose evaluation is taken into account for improvements.  
b. The university community participates in the development and evaluation of the plan. |
| 3. There should be a document that explicitly indicates the mission, purposes, objectives, and achievements of the institution and of the career. | a. Evidence of existence of and coherence among the mission, purposes, objectives, and achievements of the institution and of the career.  
b. Evidence that the career grants a title for professional practice that corresponds to the minimum agreed-upon requirements and is recognized by the highest competent educational authority. | a. The institution and the career have a mission, purposes, objectives, and achievements, and these are coherent among one another.  
b. The career grants a title for professional practice that corresponds to the minimum agreed-upon requirements and is recognized by the highest competent educational authority. |
<p>| 4. There should be institutional policies and management of the institution and of the career. | a. Evidence of coherence between the statutes and by-laws of the career and of the institution. | a. There is coherence between the statutes and by-laws of the career and of the institution. |</p>
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There should be adequate organization and management of the career</td>
<td>a. There is coherence between the standards and regulations of the career</td>
<td>a. There is coherence between the standards and regulations of the career</td>
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<td></td>
<td>and the achievement of the academic project</td>
<td>and the achievement of the academic project.</td>
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<td></td>
<td>b. Evidence of coherence between the organizational and administrative</td>
<td>b. There are economic resources and a coherent operational plan to</td>
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<td></td>
<td>governance structure of the university and the achievement of the mission</td>
<td>meet the needs of the career.</td>
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<td></td>
<td>and objectives.</td>
<td>c. There are systems in place for control of academic, administrative,</td>
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<td></td>
<td>c. Evidence of systems for the evaluation and control of academic,</td>
<td>and economic management.</td>
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<td>administrative, and economic management.</td>
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<tr>
<td>2. There should be an organizational structure and regulations for the</td>
<td>a. Evidence of coherence between the organizational and administrative</td>
<td>a. There is coherence between the organizational and administrative</td>
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<td>appointment of authorities.</td>
<td>governance structure of the university and the achievement of the mission</td>
<td>governance structure of the university and the achievement of the mission</td>
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<td></td>
<td>and objectives.</td>
<td>and objectives.</td>
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<td></td>
<td>b. Evidence of compliance with the regulations for the appointment of</td>
<td>b. There is compliance with regulations for the appointment of authorities.</td>
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<td>authorities.</td>
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<tr>
<td>3. The academic profile and functions of those responsible for the</td>
<td>Evidence of coherence between the academic profile and functions of those</td>
<td>The academic profile and functions of those responsible for the career</td>
</tr>
<tr>
<td>career should be defined.</td>
<td>responsible for the career and the academic project.</td>
<td>are consistent with the academic project.</td>
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<tr>
<td>5. There should be an information system concerning the members,</td>
<td>Evidence of an information system concerning the members, processes, and</td>
<td>There is an information system concerning the members, processes, and</td>
</tr>
<tr>
<td>processes, and outcomes of the university community.</td>
<td>outcomes of the university community.</td>
<td>outcomes of the university community.</td>
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</table>

**A.2 Organization, Governance, and Management Component**
A.3 Policies and Programs for Institutional Well-Being Component

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The career should have programs and systems in place for the promotion of culture in its various expressions, democratic and ethical values, and social responsibility.</td>
<td>Evidence of existence and operation of programs and systems for the promotion of culture in its various expressions, democratic and ethical values, and social responsibility.</td>
<td>There are programs and systems in place for the promotion of culture in its various expressions, democratic and ethical values, and social responsibility.</td>
</tr>
<tr>
<td>2. There should be programs, structures, and agencies to ensure the well-being of the university community.</td>
<td>Evidence of existence and operation of adequate health, recreation, and institutional communication programs, structures, and agencies to ensure the well-being of the university community.</td>
<td>There are adequate health, recreation, and institutional mass communication programs, structures and agencies in place to ensure the well-being of the university community.</td>
</tr>
<tr>
<td>3. There should be associations to represent each sector (faculty, administrators, students, alumni) of the university community</td>
<td>Evidence of operation of associations to represent each sector of the university community.</td>
<td>There are associations in operation that represent each sector of the university community.</td>
</tr>
<tr>
<td>4. The university or career should have institutional programs in place to provide financial aid to students</td>
<td>Evidence of institutional programs to provide financial aid to students.</td>
<td>There are institutional programs in place to provide financial aid to students, with sufficient coverage.</td>
</tr>
<tr>
<td>5. The university or career should have institutional incentive programs for faculty.</td>
<td>Evidence of institutional incentive programs for faculty.</td>
<td>There are institutional incentive programs for faculty.</td>
</tr>
</tbody>
</table>

B. ACADEMIC PROJECT Dimension

B1 Curriculum Component

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There should be a profile in place for graduates of the pharmacy career that includes specific competencies required of pharmacists, as well as general and humanistic competencies required of health professionals.</td>
<td>Evidence of the existence of a profile for graduates of the pharmacy career that includes specific competencies required of pharmacists, as well as general and humanistic competencies required of health professionals.</td>
<td>There is a profile in place for graduates of the pharmacy career and pharmacy practitioners that includes specific competencies required of pharmacists, as well as general and humanistic competencies required of health professionals.</td>
</tr>
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</tr>
<tr>
<td>2. The career should have programs and a suitable curriculum structure to support achievement of the proposed professional profile and its areas of practice in accordance with the agreed-upon core plan.</td>
<td>a. Evidence of coverage of the areas of study that permit achievement of the proposed professional profile and its areas of practice in accordance with the agreed-upon core plan.</td>
<td>There is coverage of the areas of study that permit achievement of the proposed professional profile and its areas of practice in accordance with the agreed-upon core plan.</td>
</tr>
<tr>
<td></td>
<td>b. Evidence that the career devotes enough hours to theory and practice, adequately distributed, and develops skills and attitudes that enable achievement of the proposed professional profile.</td>
<td>The career devotes the necessary number of hours, adequately distributed between theory and practice, to enable achievement of the proposed professional profile.</td>
</tr>
<tr>
<td></td>
<td>c. Evidence that the curriculum structure follows an adequate, seamless sequence with no gaps or overlaps in content so as to permit achievement of the proposed professional profile.</td>
<td>The adequate, seamless sequence of the curriculum subjects, without overlaps in content, permits the achievement of the proposed professional profile.</td>
</tr>
<tr>
<td></td>
<td>d. Evidence of agreement between the objectives, methodology, content, and bibliography of the curriculum structure.</td>
<td>There is agreement between the objectives, methodology, content, and bibliography of the subjects on the curriculum.</td>
</tr>
<tr>
<td></td>
<td>e. Evidence that the curriculum is flexible, up to date, and plural in terms of content.</td>
<td>The curriculum is flexible, up to date, and plural in terms of content.</td>
</tr>
<tr>
<td></td>
<td>f. Evidence that an integrating capstone activity, with academic supervision and consistent with the academic</td>
<td>There is an integrating capstone activity, with academic supervision and consistent with the academic</td>
</tr>
</tbody>
</table>

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3. The career should have mechanisms in place for periodic evaluation and updating of changes in the curriculum.

   a. Evidence of mechanisms in place for periodic evaluation of the program by students, faculty, and graduates.

   b. Evidence of a mechanism in place for updating, redesign, and implementation of changes in the curriculum.

   c. Evidence of an institutional system in place for the approval and dissemination of changes in the curriculum.

There are mechanisms in place for periodic evaluation of the program by students, faculty, and graduates.

There is a mechanism in place for updating, redesign, and implementation of changes in the curriculum.

There is an institutional system in place for the approval and dissemination of changes in the curriculum.

### B.2 Teaching-Learning Process Component

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The career should have teaching and learning methods suitable for the achievement of the proposed professional profile.</td>
<td>a. Evidence of use of pedagogical tools and educational methods suitable for the achievement of the professional profile.</td>
<td>Suitable pedagogical tools and educational methods are used.</td>
</tr>
<tr>
<td></td>
<td>b. Evidence of the existence of on-site activities between faculty and students.</td>
<td>There are on-site activities with involving the faculty and students.</td>
</tr>
<tr>
<td></td>
<td>c. Evidence of student satisfaction with the teaching methods employed in the program.</td>
<td>The activities of the curriculum promote the interaction between faculty and students.</td>
</tr>
<tr>
<td></td>
<td>d. Evidence that student performance is consistent with the academic project.</td>
<td>The teaching methods implemented in the program meet the students’ expectations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Student performance is consistent with the academic project.</td>
</tr>
</tbody>
</table>
2. The evaluation systems of the career should include self-evaluation of the academic project.

| a. Evidence of implementation of mechanisms that ensure periodic self-evaluation of the academic project. |
| b. Evidence of implementation of mechanisms for external evaluation of the academic project. |
| c. Evidence of implementation of mechanisms for evaluation of faculty activities. |
| d. Evidence of faculty involvement in the process of evaluation of its activities. |
| e. Evidence of implementation of student-led evaluations. |
| There are mechanisms in place for periodic self-evaluation. |
| There are mechanisms in place for external evaluation of the academic project. |
| There are mechanisms in place for evaluation of faculty activities. |
| There is faculty involvement in the process of evaluation of its activities. |
| There are mechanisms for student-led evaluation. |

3. The career should carry out training and updating activities for its academic project.

| a. Evidence of training and updating activities for graduates consistent with the academic project of the last five years. |
| b. Evidence of an impact of the training and updating activities on the academic project. |
| Training and updating activities have been held for graduates consistent with the academic project of the last five years. |
| There is a measured impact of the training and updating on the academic project. |

### B.3 Technological Research and Development Component

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The career should conduct technological research and/or development activities related to the teaching-learning process.</td>
<td>a. Evidence of the importance of research projects and of their consistency with the teaching-learning process.</td>
<td>Information and research findings are incorporated into the content of the curriculum. Students participate in research projects. Activities with the involvement of faculty and students are held to discuss the research that is conducted at the institution.</td>
</tr>
<tr>
<td></td>
<td>b. Evidence of the importance of research projects for society</td>
<td>Research projects have been disseminated and/or transferred.</td>
</tr>
<tr>
<td>Criteria</td>
<td>Indicators</td>
<td>Standards</td>
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</tr>
<tr>
<td>2. The career should have programs and resources for the development of research activities.</td>
<td>a. Evidence of programs and resources for the development of research activities.</td>
<td>There are programs and resources for the development of research activities.</td>
</tr>
<tr>
<td>c. Evidence of student involvement in scientific and technological organizations in the last five years.</td>
<td>External actors are involved in the research projects. External contributions are made to the research projects.</td>
<td></td>
</tr>
<tr>
<td>d. Evidence of the importance of research and/or development projects.</td>
<td>Students have been involved in scientific and technological organizations in the last five years. Research and/or development projects have had scientific, technological, and/or social importance. Research projects lead to undergraduate theses and graduate dissertations and to publication in indexed journals.</td>
<td></td>
</tr>
<tr>
<td>e. Evidence that the scientific output leads to theses and dissertations and to publication in indexed journals.</td>
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</table>

### B.4 Extension, Outreach, and Cooperation Component

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The career should carry out academic extension activities consistent with the needs of society.</td>
<td>a. Evidence of results of the main partnerships and extension activities consistent with the academic project and the needs of society in the last five years.</td>
<td>The extension projects and activities carried out during the last five years have social relevance and are consistent with the academic project.</td>
</tr>
<tr>
<td>b. Evidence of involvement of faculty, students, and graduates in extension activities in the last five years.</td>
<td>The extension projects carried out during the last five years have connected faculty, students, and/or graduates.</td>
<td></td>
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</table>

### C. HUMAN RESOURCES Dimension

#### C.1 Faculty Component

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<th>Criteria</th>
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<th>Standards</th>
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<tr>
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</table>
1. The composition of the faculty should be relevant to the academic project.

<p>| | |</p>
<table>
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</thead>
<tbody>
<tr>
<td>a. Evidence of an adequate faculty composition and student-faculty ratio.</td>
<td>There is an adequate ratio of exclusively dedicated, full-time, and/or part-time faculty members to students in the program.</td>
</tr>
<tr>
<td>b. Evidence of mechanisms (examinations or others) for admission and promotion of faculty members and tenure criteria.</td>
<td>There are periodic examinations for the admission of new faculty and mechanisms in place for promotion and tenure in teaching positions.</td>
</tr>
<tr>
<td>c. Evidence of consistency in the proportion of faculty members with graduate degrees.</td>
<td>There is a predominance of holders of specialty, master’s, or doctoral degrees among the full-time faculty.</td>
</tr>
<tr>
<td>d. Evidence that the scientific, technological and pedagogical training of faculty members is consistent with the disciplines they teach.</td>
<td>The training of the faculty members is consistent with the disciplines they teach and the field of knowledge.</td>
</tr>
</tbody>
</table>

2. The academic output of the faculty should be related to the academic project.

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<tbody>
<tr>
<td>a. Evidence of faculty involvement in undergraduate and graduate courses consistent with the academic project.</td>
<td>There is faculty involvement in undergraduate and graduate courses consistent with the academic project.</td>
</tr>
<tr>
<td>b. Evidence of faculty involvement in academic advisorships, capstone projects, and/or submitted and accepted theses (undergraduate and graduate-level), curriculum development activities, and educational innovations consistent with the academic project in the last five years.</td>
<td>There has been faculty involvement in academic advisorships, capstone projects, and/or submitted and accepted theses (undergraduate and graduate-level), curriculum development activities, and educational innovations consistent with the academic project in the last five years.</td>
</tr>
<tr>
<td>c. Evidence of faculty involvement in research projects and scientific, educational, and technical publications consistent with the academic project in the last five years.</td>
<td>There has been faculty involvement in research projects and scientific, educational, and technical publications consistent with the academic project in the last five years.</td>
</tr>
<tr>
<td>d. Evidence of faculty involvement in other major</td>
<td>There has been faculty involvement in other major</td>
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</table>
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<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
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<tbody>
<tr>
<td>3. The program should conduct activities that keep faculty members up to date on educational aspects, their fields of knowledge, and professional aspects.</td>
<td>a. Evidence of training and updating of faculty members with regard to educational, disciplinary, and professional aspects consistent with the academic project in the last five years.</td>
<td>In the last five years, activities have been held for training and updating of faculty members with regard to educational, disciplinary, and professional aspects consistent with the academic project.</td>
</tr>
<tr>
<td>4. Mechanisms for faculty training, evaluation, and promotion should be adequate.</td>
<td>a. The career ensures the involvement of its faculty members in teaching, research, and social extension activities and sets this out in formal documents.</td>
<td>At least 50% of faculty members have participated in training or updating processes related to the career.</td>
</tr>
</tbody>
</table>

C.2 Student Body Component

<table>
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<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
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</thead>
<tbody>
<tr>
<td>1. There should be coherence between the criteria for student admission and permanence and the academic project.</td>
<td>a. Evidence of an admissions system that ensures equality of opportunity and student follow-up and retention mechanism and that includes special admission programs.</td>
<td>There is an admissions system in place that ensures equality of opportunity and there are mechanisms for mobility to and from other Universities, in accordance with the academic project.</td>
</tr>
<tr>
<td></td>
<td>b. Evidence of mechanisms for mobility to and from other Universities, in accordance with the academic project.</td>
<td>There are follow-up mechanisms and strategies in place to foster student retention.</td>
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<tr>
<td></td>
<td>c. Evidence of regulations that regulate student activities accessible to the university community.</td>
<td>There are regulations in place to regulate student activities, accessible to the university community.</td>
</tr>
<tr>
<td>2. There should be coherence between the number of students and the academic project.</td>
<td>a. Evidence of a suitable student per course ratio and that a suitable workload is assigned to students.</td>
<td>There is a suitable student per course ratio and a suitable workload is assigned to students.</td>
</tr>
<tr>
<td>3. There should be</td>
<td>a. Evidence of attendance,</td>
<td>There is an adequate relationship</td>
</tr>
</tbody>
</table>
coherence between student performance and the academic project.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. There should be adequate mechanisms in place to provide information and address students’ questions, opinions and complaints.</td>
<td>a. Evidence of mechanisms to provide information and address students’ questions, opinions and complaints.</td>
<td>There are mechanisms in place to provide information and address students’ questions, opinions and complaints.</td>
</tr>
</tbody>
</table>

### C.3 Alumni Component

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alumni should be included and participate in a variety of academic and professional activities.</td>
<td>a. Evidence of involvement of alumni in a variety of academic and professional activities. b. Evidence of mechanisms to ensure incorporation of the opinion of alumni into the academic project.</td>
<td>Alumni are involved in a variety of academic and professional activities. There are mechanisms in place to ensure incorporation of the opinion of alumni into the academic project.</td>
</tr>
<tr>
<td>2. Alumni should be adequately integrated into the workforce.</td>
<td>a. Evidence of adequate integration of alumni into the workforce.</td>
<td>Alumni are adequately integrated into the workforce.</td>
</tr>
</tbody>
</table>

### C.4 Support Staff Component

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There should be an adequate number and distribution of non-teaching staff according to the needs of the institution.</td>
<td>a. Evidence of mechanisms for incorporation of non-teaching staff according to the needs of the institution.</td>
<td>There are mechanisms in place for incorporation of non-teaching staff according to the needs of the institution.</td>
</tr>
</tbody>
</table>
### IX Pan American Conference on Pharmaceutical Education

#### Proposal for accreditation of pharmacy careers in Latin America

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff in order to meet the needs for the academic project.</td>
<td>The different areas and services necessary for implementation of the academic project.</td>
<td>Different areas and services necessary for implementation of the academic project.</td>
</tr>
<tr>
<td>2. There should be coherence between the skills and training level of non-teaching personnel and the needs of the academic project.</td>
<td>a. Evidence of coherence between the skills and training level of non-teaching personnel and the needs of the academic project.</td>
<td>There is an adequate relationship between the skills and training level of non-teaching personnel and the needs of the academic project.</td>
</tr>
<tr>
<td>3. There should be adequate mechanisms for training, evaluation, and promotion of non-teaching staff.</td>
<td>a. Evidence that adequate mechanisms are in place for training, evaluation, and promotion of non-teaching staff.</td>
<td>Adequate mechanisms are in place for training, evaluation, and promotion of non-teaching staff.</td>
</tr>
</tbody>
</table>

#### D. INFRASTRUCTURE Dimension

##### D.1 Physical and Logistical Infrastructure Component

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The characteristics of the infrastructure should be in accordance with the academic project.</td>
<td>a. Evidence of physical availability, accessibility, hygiene, and safety of administrative, recreation, services, teaching, work, and housing areas for the university community, in accordance with the needs of the academic project.</td>
<td>There is physical availability, accessibility, hygiene, and safety of administrative, recreation, services, teaching, work, and housing areas for the university community, in accordance with the needs of the academic project.</td>
</tr>
<tr>
<td></td>
<td>b. Evidence of maintenance, custodial, and safety services consistent with these needs.</td>
<td>There are maintenance, custodial, and safety services consistent with these needs.</td>
</tr>
</tbody>
</table>

##### D.2 Library Resources Component

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The library collection and computerized services should be</td>
<td>a. Evidence that the library collection is up-to-date and sufficient in relation to the needs of the program.</td>
<td>The library collection is up-to-date and sufficient in relation to the needs of the program.</td>
</tr>
<tr>
<td>Criteria</td>
<td>Indicators</td>
<td>Standards</td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>-----------</td>
</tr>
<tr>
<td>1. Laboratories, special facilities, and equipment should be suitable for the academic project.</td>
<td>a. Evidence of the adequacy of laboratories, special facilities, and equipment for the academic project.</td>
<td>There are laboratories, special facilities, and equipment suitable for the academic project.</td>
</tr>
<tr>
<td>2. Educational resources should be consistent with the academic project.</td>
<td>a. Evidence of educational resources consistent with the academic project.</td>
<td>There are educational resources consistent with the academic project.</td>
</tr>
<tr>
<td>3. There should be spaces available for pre-professional practice, whether at the institution itself or through agreements with other institutions.</td>
<td>a. Evidence of the availability of spaces for pre-professional practice, whether at the institution itself or through agreements with other institutions.</td>
<td>There are spaces available for pre-professional practice, whether at the institution itself or through agreements with other institutions.</td>
</tr>
</tbody>
</table>

**D.3 Laboratories and Special Facilities Component**

**E. Social and Professional Integration and Alumni Follow-Up Dimension**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There should be systematic mechanisms for linkage with the social environment, productive sector, and service sector related to the career.</td>
<td>a. Evidence of mechanisms for linkage with the social environment, productive sector, and service sector related to the career.</td>
<td>There are institutional mechanisms for linkage with the social environment, productive sector, and service sector related to the career.</td>
</tr>
<tr>
<td>2. The career should have mechanisms for the external</td>
<td>a. Evidence of mechanisms for the external involvement of</td>
<td>There are mechanisms for the external involvement of the</td>
</tr>
</tbody>
</table>
involvement of the professional sector in curriculum planning, development, and review. | the professional sector in curriculum planning, development, and review. | professional sector in curriculum planning, development, and review. |
---|---|---|
3. There should be mechanisms for consultation of employers regarding current needs for professional performance. | a. Evidence of mechanisms for consultation of employers regarding current needs for professional performance. | There are mechanisms in place for consultation of employers regarding current needs for professional performance. 
The contents of the subjects of the program reflect these needs. |
4. The career should have a policy of extension toward the community in the relevant fields of knowledge. | a. Evidence of explicit extension policies. | The university conducts outreach activities. 
The institution assesses these outreach activities in its mechanisms for faculty evaluation. |
5. The career should deliver specialized services that contribute to the educational process. | a. Evidence of policies that regulate the delivery of services by the unit. | There are technical reports that cover solving of extramural problems. 
The institution includes the delivery of specialized services in its mechanisms for faculty evaluation. |
6. There should be programs for critical evaluation of the ethical and human aspects of professional practice. | a. Evidence of academic contents that facilitate the development of critical thinking in the ethical and human aspects of professional practice. | The career includes courses or other formal activities that incorporate critical evaluation of the ethical and human aspects of professional practice. |

**FINAL NOTES**

The analysis and evaluation of this proposal should take into account that this document is merely an attempt to construct a frame of reference on quality standards for pharmacy education in different countries, and does not seek to build a consensus for professional qualification. Furthermore, self-evaluation and procedural guidelines are required.
11. References


11. Coordenacao de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). Available at: http://www.capes.gov.br


### Annex 1. List of acronyms of evaluation and accreditation bodies

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANECA</td>
<td>National Agency of Quality Evaluation and Accreditation, Spain.</td>
</tr>
<tr>
<td>CAC</td>
<td>Commission for Quality Accreditation, El Salvador.</td>
</tr>
<tr>
<td>CAPES</td>
<td>Coordenação de Aperfeiçoamento de Pessoal de Nível Superior. Created by Decree No. 29,741 of 1951, Law No. 8,405 of 1992, Brazil.</td>
</tr>
<tr>
<td>CES</td>
<td>Higher Education Council, Chile.</td>
</tr>
<tr>
<td>CCETP</td>
<td>Advisory Committee on Private Higher Education, Uruguay.</td>
</tr>
<tr>
<td>CNA</td>
<td>National Accreditation Committee</td>
</tr>
<tr>
<td>CNA</td>
<td>National Accreditation Council, Law No. 30 of 1992, Colombia.</td>
</tr>
<tr>
<td>CONANCES</td>
<td>National Intersectoral Committee for Quality Assurance in Education. Created by Decree No. 2230 of 2003, Colombia.</td>
</tr>
<tr>
<td>CNAP</td>
<td>National Undergraduate Accreditation Committee. Created by the Ministry of Education, Chile, 1999.</td>
</tr>
<tr>
<td>CONAP</td>
<td>National Graduate Accreditation Committee, Chile. Created by the Ministry of Education, Chile, 1999.</td>
</tr>
<tr>
<td>CNA-Chile</td>
<td>National Accreditation Committee. Created by the Quality Assurance Law of 2006. This agency subsumes CNAP and CONAP.</td>
</tr>
<tr>
<td>CONAEVA</td>
<td>National Committee for the Evaluation of Higher Education. Created within the framework of Conpes, Mexico, 1989.</td>
</tr>
<tr>
<td>CIIES</td>
<td>Interinstitutional Committees for Higher Education Assessment</td>
</tr>
<tr>
<td>CENEVAL</td>
<td>National Center of Evaluation for Higher Education, established as a civic association, Mexico, 1994.</td>
</tr>
<tr>
<td>CONEAUPA</td>
<td>National University Evaluation and Accreditation Council of Panama. Created by law on 30 July 2006, Panama.</td>
</tr>
</tbody>
</table>

CONARE  National Council of Rectors, Costa Rica.

CONEAU  National Council for Evaluation, Accreditation, and Quality Certification of University-Level Higher Education, created by Law No. 28,740, Peru.


CONESUP National Higher Education Council, Ecuador.

CNU  National University Council, created by Presidential Decree No. 408, Venezuela, 1946-1970.


SICEVAES Central American System for Evaluation and Harmonization of Higher Education

UCJ  University Council of Jamaica
Annex 2. Glossary

ACADEMIC COMMUNITY. Group of people comprising the faculty and the student body (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

ACADEMIC PERSONNEL. Faculty members who carry out teaching and research activities (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

ACADEMIC PROGRAM. Institutional document that describes the mission and the objectives of the program, its academic and administrative organization, its plan and curriculum, its students, its faculty, its infrastructure, and its funding, which, together, support human resources education in a particular area of knowledge (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

ACTIVITIES, EXTENSION. Planned actions that enable transfer of the scientific and technological knowledge generated by the university to society (Glossary of terms of the National University of Asunción, 2011).

ACTIVITIES, EXTRACURRICULAR. Activities that are not part of the curriculum and are meant to supplement the comprehensive training of the student body (RIACES).

ACTIVITIES, INTEGRATING. Activities whose purpose is to build knowledge centered on the achievement of global and multidisciplinary conceptions. Integration essentially implies looking at reality from multiple perspectives with a view to understanding it, while having the enhancement of learning quality as a linchpin (Glossary of the National University of the Southern Chaco, Argentina, 2012).

ACTIVITIES, PRACTICAL. Activities that allow the student to acquire the abilities and skills required for the observation and measurement of phenomena, execution of procedures, and conduction of experiments applicable to the chosen career (Glossary of the National University of the Southern Chaco, Argentina, 2012).

ACTIVITIES, THEORETICAL-PRACTICAL. Activities that articulate theoretical knowledge and practical action. Theoretical and practical aspects are developed at the same time, in an interrelated manner (Glossary of the National University of the Southern Chaco, Argentina, 2012).

ACTIVITIES, THEORETICAL. Teaching-learning activities in which the knowledge necessary for preparation, interpretation, construction, and foundation of practice is acquired. In these activities, a topic relative to the discipline at hand is presented (Glossary of the National University of the Southern Chaco, Argentina, 2012).

ADMINISTRATIVE AND SERVICE PERSONNEL. Non-teaching staff members or workers who form the administrative, managerial, and service structure of the university (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).
ADMISSION. Acceptance of a person to begin studies at an institution of higher education. Admission enables enrollment in the basic academic course of a career or program. Admission may be conditional to tests or examinations specific to the country as a whole, to the institution, or to a given center. The accreditation processes take admission requirements into account (RIACES).

ASSESSMENT, FORMATIVE. Evaluation designed to improve the processes or qualities of an object when they are still at the development stage, assessing their positive and negative attributes (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

ASSESSMENT, INITIAL. Consists of data collection at the starting point of a facility or program, whose analysis and interpretation provides a diagnosis that will be used to carry out, if necessary, a rethinking of the general operation of the facility or program, of the objectives to be achieved within a given time frame, or of other aspects (Glosario de siglas y términos. Ileana Dopico Mateo. Junta de Acreditación Nacional. Ciudad de La Habana: Editorial Universitaria, 2010).

ASSESSMENT, SUMMATIVE. Suitable for evaluation of a product, i.e., the result of a process already completed at the present time, and when one seeks to determine the value of said product (positive or negative) in relation to its intended use. It is recommended as a means of resolving multiple alternatives that arise during long periods, as well as for selection, certification, and for assessment of social responsibility (Glosario de siglas y términos. Ileana Dopico Mateo. Junta de Acreditación Nacional. Ciudad de La Habana: Editorial Universitaria, 2010).

CAPSTONE PROJECT (OR DISSERTATION). Written work presented within the official framework of a doctoral program, based on an independent research project, and valid towards obtaining a graduate degree or the title of doctor (Glossary Tuning).

CAREER MANAGEMENT. Expressed in such aspects as the methodological work of pedagogical collectives as a function of the didactic structuring of the process corresponding to the requirements of the career and its study modalities, educational and curricular strategies, the use of the infrastructure available at the institution and in the territory, extensions of scientific research, the research/work activities of students, partnerships with the agencies of the central government of the State, the teaching and training role of faculty members, the scientific and professional quality of the faculty senate, among others. Such management is geared toward providing the necessary facilities and enabling the most efficient use of the available resources (Glosario de siglas y términos. Ileana Dopico Mateo. Junta de Acreditación Nacional. Ciudad de La Habana: Editorial Universitaria, 2010).

COMPREHENSIVE EDUCATION. Development of the human being in the physical, intellectual, emotional, ethical, and aesthetic spheres. Also defined as the balanced development of the potentials of a student, which trains said student both to carry out the duties of his or her occupation with efficacy and efficiency and to participate as a responsible citizen by using his or her individual capabilities to build a better future for all./Formulates mid- and long-term academic training policies and strategies (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

CONTACT HOUR. Period of 45-60 minutes of in-person education (i.e., of contact/cooperation between a faculty member and a student or group of students) (Glosario Tuning).

1 Depending on the country, this alliance can extend to other nongovernmental external bodies.
CORE CURRICULUM CONTENT. Essential knowledge that a professional should acquire in order to successfully perform the duties of their title, and that ensure the necessary capabilities and attitudes for continued professional development (Competencias del farmacéutico para desarrollar los servicios farmacéuticos (SF) basados en Atención Primaria de Salud (APS) y las Buenas Prácticas en Farmacia (BPF), March 2012).


CURRICULUM MAP. A structural component of the curriculum. It should fulfill the up-to-date scientific, technological, and sociocultural knowledge of the different systematized knowledge areas that are included in the plan and the prospective nature of professional training. It should also establish mechanisms for curriculum flexibility consistent with the design, disciplinary characteristics, and needs of the students, so as to facilitate learning (VII Pan American Conference on Pharmaceutical Education, Document arising from the Basic Plan Workshop).

CURRICULUM. Interrelated set of concepts, policies, guidelines, proposals, and educational strategies that explicitly govern and lead the teaching-learning processes for development and comprehensive education of students in the field of higher education (Propuesta de Autoevaluación de la Universidad Tecnológica Nacional documento nº 4 (s.f.), Glosario de términos y expresiones utilizadas con una aceptación particular. Argentina. Universidad de Caldas. Consejo Académico 2002).

FULL-TIME. A common way of referring to the dedication of faculty members or students. Internationally, it is understood that a faculty member works “full time” if he or she works at least 90% of the time defined for a typical work day. On the other hand, a higher education student is considered “full time” when he or she is officially enrolled for at least 75% of what would be considered a normal study workload (Glosario Internacional RIACES de evaluación de la calidad y acreditación, 2004).

GRADUATE PROFILE. Characteristics that are obtained and, it is implied, are to be expected of a student at the end of the learning process. These profiles also enable establishment of courses of action for the preparation of plans and programs. Component of a curriculum consisting of the definition of the academic and professional characteristics that should be exhibited by a student that has completed it. Model, prepared by an educational institution, that establishes its purposes concerning what its graduates should be, in terms of which specific forms of technical training they should have (theoretical-practical), which assessment approach should be achieved, and which type of social need that should meet (VII Pan American Conference on Pharmaceutical Education, Document arising from the Basic Plan Workshop).

HORIZONTAL ARTICULATION OF COURSES. Coherent and proper sequence, within a single academic course and throughout one’s studies, of the contents of the subject matter that compose the curriculum of the teachings to be evaluated (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

IMPACT, SOCIAL. External influence of the career in terms of the contributions and transformations it exerts on the social context, in response to the needs of the environment, by means of its alumni and outreach activities, research activities, and ties with companies and institutions of a scientific or cultural nature (VII Pan American Conference on Pharmaceutical Education, Document arising from the Basic Plan Workshop).
INCOMING PROFILE. Set of defined knowledge and competencies that incoming students enrolling in a program should have. This profile explicitly lists the set of general competencies, specialized competencies, and ethical aspects inherent to training of a professional in this field. Set of requirements that a person should meet in order to be admitted to an educational institution, so that he or she will be deemed capable of attending a certain grade or cycle. These aspects include psychological, knowledge and skills, etc. (VII Pan American Conference on Pharmaceutical Education, Document arising from the Basic Plan Workshop).

INDICATORS, QUALITATIVE. Indicators not estimated numerically. The most important objective is to ensure the quality of the skills of the students and, regarding faculty members, to ascertain the real possibilities of an academic and professional career. (Glosario de siglas y términos. Ileana Dopico Mateo. Junta de Acreditación Nacional. Ciudad de La Habana: Editorial Universitaria, 2010).

INFRASTRUCTURE AND EQUIPMENT. Set of material resources that are used in the educational processes – buildings, classrooms, laboratories, computers, facilities – from the standpoint of the real possibility of their use by students and faculty members, in accordance with the programs and curricula (RIACES).

MEANINGFUL LEARNING. Type of learning characterized by presupposing the actual incorporation of new content into the mental structure of the student, thus becoming part of his or her long-term memory. Meaningful learning works by establishing non-arbitrary relationships between the previous knowledge of the student and the new material. Content should be potentially logical so as to motivate the student (Glossary of terms of the National University of Asunción, 2011).

MOBILITY. Option whereby students, faculty members, or administrative and service personnel spend a given period studying or working at another institution of higher education, domestic or foreign (RIACES).

OUTREACH. A process of education and involvement through which the University acts on and affects various sectors of the population without discriminating by economic status, ethnicity, culture, politics, or religion, for the purpose of contributing to the integrated development of people and communities, facilitating autonomous and self-managed community experiences (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

PEDAGOGICAL FLEXIBILITY. Incorporation into the teacher-student relationship of different modalities that help enhance student empowerment, facilitate a comprehensive education throughout everyday life at the university and subsequently in professional life, and foster the pleasure of thinking and building knowledge, skills, and attitudes (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

PHARMACEUTICAL PRACTICE AND PROFESSIONAL EXPERIENCE. Activities designed for the practical learning and performance of competencies, integrating knowledge of the different areas into practices, in the form of work at health centers, drugstores, health projects and campaigns, fieldwork in the community, internships at industrial laboratories, at documentation centers etc. The activities are carried out in real-world settings, which leads to development of practical knowledge and of creativity.

POLICIES. General statements or interpretations that guide the thinking of those responsible for decision making within the program (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

PRACTICUM. Set of training activities carried out by students at companies or institutions and designed to develop the practical and professional portion of the training program. These activities may be compulsory
character or voluntary and may or may not be recognized in the curriculum (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

PROFESSIONAL PROFILE. Set of capabilities and competencies that identify the qualification of a person to take on, under optimal conditions, the characteristic responsibilities required to carry out the roles and tasks of a given profession. It is a summary of the knowledge and competencies that a graduate should acquire over the course of his/her studies. This knowledge and competencies should provide the student with a solid foundation, both theoretical and practical, that enables their application to different professional settings. Set of requirements that a person should meet so they can be considered fit to practice a given profession (VII Pan American Conference on Pharmaceutical Education, Document arising from the Basic Plan Workshop).

RELEVANCE. Degree of correspondence between the purposes pursued by the academic institution and the needs of society at large (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

STRATEGIC PLAN. Also known as a multiannual plan or development plan. It constitutes the mid- and long-term plans of an institution of higher education, regarding activities and expansion of resources and buildings, usually over several years (3 or 4). It should specify the required investments and ways of obtaining these financial resources (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

STUDENT. Student enrolled in some program or career within an institution of higher education. People who have studied at a certain institution of higher education may be known as its former students, graduates, or simply alumni. One can be a student of more than one institution, program, or career (Glosario Internacional RIACES de evaluación de la calidad y acreditación, 2004).

STUDENT’S WORKLOAD. All the learning activities required for achieving the results of the learning process (e.g., classes, practical activities, searching for information, personal study time, etc.) (Glosario Tuning).

STUDY PLAN. Instrument that, based on an educational orientation, specifies and articulates objectives, contents, and teaching-learning strategies to support the education of a person within the context of a complete education cycle. Organized by subjects, disciplines, credits, courses, and teaching groups. See curriculum (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).

SUBJECT. Each teaching unit that composes a curriculum from the administrative standpoint. Academically, it is the constituent part of a discipline. Each subject tends to have credits assigned to it in relation to the number of contact hours or total working hours of the students. Several types of subjects exist: core, compulsory, optional, elective, common, specific, etc. (RIACES).

TITLE. Diploma or certificate that ensures that the recipient has successfully completed an entire curriculum. A title may refer to a career or a specialty. It is synonymous with degree, i.e., the diploma granted to a student, but also with career or program. The granting of a title suggests the existence of an elaborate curriculum (RIACES).

UNIVERSITY COMMUNITY. All the classes, guidelines, students, faculty members, employees, workers, and alumni who make up the university (Glosario Consejo Nacional de Acreditación—CNA/Ministerio de Educación Nacional—MEN/Normas Técnicas Colombianas ISO 9001, v. 2000).
UNIVERSITY EXTENSION. Group of activities of an institution of higher education through which its actions are projected toward its social surroundings, thus disseminating knowledge and culture (VII Pan American Conference on Pharmaceutical Education, Document arising from the Basic Plan Workshop).

REFERENCES
- Glosario de la Red Iberoamericana de la Acreditación de la Calidad de la Educación Superior RIACES, 2007
- Glosario de la Agencia Nacional de Evaluación y Acreditación de la Educación Superior, ANEAES 2007
- Glosario de la Universidad Nacional de Asunción, 2011
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- www.mineducacion.gov.co/EsuperiorDOC/CONACES.htm
- www.anr.edu.pe/conafu/