



HANDBOOK ON TYPOLOGY, OUTCOMES-BASED EDUCATION, AND INSTITUTIONAL SUSTAINABILITY ASSESSMENT

2014
COMMISSION ON HIGHER EDUCATION

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Handbook on Typology, Outcomes-Based Education, and Institutional Sustainability Assessment

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Office of Institutional Quality Assurance and Governance

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CONTENTS

ACKNOWLEDGEMENTS.....	6
ACRONYMS	7
PART I – INTRODUCTION	8
PART II – HORIZONTAL AND VERTICAL TYPOLOGIES.....	12
Choosing Your Horizontal Type	13
Operational Criteria for the Different Horizontal Types.....	15
Vertical Classification as a Measure of Quality	17
Program Excellence	18
Institutional Sustainability and Enhancement.....	18
Autonomy and Deregulation	20
PART III – OUTCOMES-BASED EDUCATION	24
Determining Program Outcomes	27
Aligning with the HEI’s VMG	27
Using PSGs as Guide to Determining Program Outcomes	28
Using HEI Type	28
Determining Performance Indicators and Standards.....	30
Indicators, Metrics, Targets	31
Designing the Learning Environment.....	32
Preparing a Curriculum Map	32
Planning for Resources	33
Implementing the Teaching-Learning System.....	34

Curriculum Delivery: Student-Centered Courses	34
Developing an Outcomes-Based Syllabus and Learning Plan	35
Assessment of the Program Outcomes	40
Completing the Quality Cycle: Continuous Quality Improvement	41
PART IV – INSTITUTIONAL SUSTAINABILITY ASSESSMENT: TOWARDS OUTCOMES-BASED QUALITY ASSURANCE	43
Determining Institutional Outcomes	43
Outcomes based on HEI VMG	43
Describing the Ideal Graduate Attributes and Impact on Society	45
Indicators, Metrics, Targets	48
Designing Institutional Systems	48
Planning for Resources	49
Planning with the KRAs	49
Implementing the QA Systems	56
Efficiency and Effectiveness	56
QA Systems for the KRAs	57
Assessment of the Institutional Outcomes	58
The Institutional Sustainability Assessment Tool	59
Completing the Quality Cycle: Continuous Quality Improvement	59
PART V – DEFINITION OF TERMS.....	60
BIBLIOGRAPHY	71
ANNEX 1 – CRITERIA FOR COMMITMENT TO EXCELLENCE: EQUATIONS TO DETERMINE POINTS FOR LOCAL ACCREDITATION	73

ANNEX 2 – INSTITUTIONAL SUSTAINABILITY ASSESSMENT FRAMEWORK	75
<i>Table A2-1. ISA: KRA Indicators and Criteria</i>	75
<i>Table A2-2. ISA Indicators by HEI Type</i>	76
<i>Table A2-3. Summary of ISA Indicators according to HEI Type</i>	77
<i>Table A2-4. Rubric for Rating Each Indicator</i>	77
<i>Table A2-5. Minimum Scores to Qualify for Autonomous and Deregulated Status</i>	78
ANNEX 3 – SAMPLE CURRICULUM MAPS FROM THE NURSING PROGRAM.....	79
ANNEX 4 – RECOMMENDED VERBS FOR WRITING LEARNING OUTCOMES	83
ANNEX 5 – SAMPLE SYLLABUS	86
ANNEX 6 – SAMPLE LEARNING PLAN	87
ANNEX 7 – PROGRAM OUTCOMES – PERFORMANCE INDICATORS – ASSESSMENT EVALUATION METHODS – STANDARDS MATRIX.....	88

LIST OF FIGURES

Figure 1. Outcomes-Based Quality Assurance	9
Figure 2. Outcomes-Based Framework for Higher Education.....	10
Figure 3. Framework for Outcomes-based Education.....	24
Figure 4. Sample of a SWOT Analysis for an HEI	45

LIST OF TABLES

Table 1. Criteria for Commitment to Excellence (70%)	18
Table 2. Criteria for Institutional Sustainability and Enhancement (30%)	19
Table 3. Point System for Autonomous by Evaluation (Minimum of 80 points plus additional evidences).....	20
Table 4. Point System for Deregulated by Evaluation (Minimum of 65 points plus additional evidences).....	22

Table 5. Ideal Typical Depiction of Inputs-based and Outcomes-based Education Paradigms.....	25
Table 6. Changing Educational Paradigms and their Implication for Education	27
Table 7. Sample Curriculum Map	33
Table 8. Shift in Perspective using an Outcomes-based Approach.....	36
Table 9. Sample Elements of a Learning Plan.....	40

LIST OF BOXES

Box 1. Examples of Program Outcomes by Discipline	29
Box 2. Examples of Learning Outcomes.....	30
Box 3. Example of Determining Learning Outcomes	36
Box 4. Ten Points to Remember in Writing Outcomes.....	37
Box 5. Example of Selection of Methodology	38
Box 6. A System Illustrating how OBE Concepts can be Practiced as Developed by TP for Engineering	42
Box 7. Example of Institutionalizing QA Systems	47
Box 8. Example of Setting Indicators, Metrics, and Targets.....	48
Box 9. Points to Consider in KRA Governance and Management	51
Box 10. Points to Consider in KRA Quality of Teaching and Learning	52
Box 11. Points to Consider in KRA Professional Exposure, Research, and Creative Work	54
Box 12. Points to Consider in KRA Support for Students.....	55
Box 13. Points to Consider in KRA Relations with the Community	56

ACKNOWLEDGEMENTS

In a borderless society, cross-country mobility of students, workers, and businesses is bound to happen. For the Philippines, this means more opportunities for the Filipinos to study or work abroad as well as more foreign students and workers coming in the country. But to be globally competitive, there is a need to ensure that Filipinos have the right competencies and attitudes through excellent quality education at all levels.

To address the demands and challenges of an international community, the Philippine government have been implementing educational reforms for the past few years. In basic education, we have the universalization of kindergarten, the mother-tongue based education in the early years, and the senior high school.

In higher education, we have shifted from an inputs-based to an outcomes-based education (OBE), thus placing the students in the center of all educational planning. There is also a recognition that higher education institutions (HEIs) are different from each other and thus, a typology or classification of HEIs was developed to guide HEIs to have an alignment among their vision, mission, and goals (VMGs); their desired graduate attributes and impact on society; and their educational programs. A major key that will enable HEIs to achieve their VMGs is their institutional quality assurance systems which they could establish following the Institutional Sustainability Assessment (ISA) framework.

There have been questions on the typology of HEIs, OBE, and ISA and these concepts have been explained in CMO No. 46, series 2012, however, the specifics can be found in this handbook. It was not designed to be comprehensive, but it gives enough information to guide HEIs, the Technical Panels and Technical Committees of the Commission on Higher Education (CHED), and other stakeholders to move forward towards an outcomes-based and typology-based quality assurance.

This handbook would have not materialized without the technical expertise and assistance of the Task Force to Assist the Management of the Transition to Outcomes-based and Typology-based Quality Assurance (TFOTQA). CHED is greatly appreciative of the unselfish contribution and collective effort of the TFOTQA members, chaired by Dr. Maria Assunta Cuyegkeng and co-chaired by Dr. Reynaldo Vea.

Special thanks also goes to Commissioner Maria Cynthia Bautista and Dr. Allan Bernardo who were part of the Task Force on Quality Assurance (TFQA) that conceptualized the typology of HEIs.

ACRONYMS

ABET	Accreditation Board for Engineering and Technology
ASEAN	Association of Southeast Asian Nations
CHED	Commission on Higher Education
CMO	CHED Memorandum Order
COD	Center of Development
COE	Center of Excellence
CQI	Continuous Quality Improvement
CSO	CHED Special Order
EHEA	European Higher Education Area
EUR-ACE	EUR opean AC credited E ngineer
HEI	Higher Education Institution
HOTS	Higher Order Thinking Skills
ICT	Information and Communications Technology
IQuAME	Institutional Quality Assurance Monitoring and Evaluation
ISA	Institutional Sustainability Assessment
IT	Information Technology
LLL	Lifelong Learning
KPI	Key Performance Indicator
KSA	Knowledge, Skills, and Attitudes
MRA	Mutual Recognition Agreements
OBE	Outcomes-based Education
OBTL	Outcomes Based Teaching and Learning
OJT	On-the-Job Training
PEO	Program Educational Objectives
PQA	Philippine Quality Award
PQF	Philippine Qualification Framework
PTC	Philippine Technological Council
PSG	Policies, Standards, and Guidelines
QA	Quality Assurance
SED	Self-Evaluation Document
SMART	Specific, Measurable, Attainable, Realistic, and Time-bound
STCW	Seaman's Training Certification Watchkeeping
SWOT	Strengths, Weaknesses, Opportunities and Targets
TFQA	Task Force on Quality Assurance
TP	Technical Panel
VMG	Vision, Mission and Goals

PART I – INTRODUCTION

“The changing realities spurred by globalization underscore the shift in contemporary international education discourse from education to lifelong learning, and from education as transmission of expert knowledge to education as building learner competencies – including learning how to learn.”¹

Furthermore, *“jobs can be moved readily from one country to another, and multi-national employers do not hesitate to relocate jobs to their maximum advantage. There will be many factors influencing relocation, including cost, access to markets, and the regulatory environment of a country, among others.”²*

These are realities that Philippine higher education institutions (HEIs) have to face or already facing as they compete in a global and regional arena, where borders are starting to disappear.

What this means is that the competitive advantage of Philippine HEIs – and in many cases, their survival – is premised on their ability to offer quality degree programs that meet world-class standards and produce graduates with lifelong learning competencies. HEIs are therefore expected to develop *“human resources with various types of knowledge, competencies, and expertise, especially in support of the social, economic, and development needs of the Philippines.”³*

As such, the Commission on Higher Education (CHED) *“supports the development of HEIs into mature institutions by engaging them in the process of promoting a culture of quality. Premised on a shared understanding of quality, CHED encourages institutional flexibility of HEIs in translating policies into programs and systems that lead to quality outcomes, assessed and enhanced within their respective internal quality assurance (QA) systems.”⁴*

CHED Memorandum Order (CMO) No. 46, series 2012, entitled “Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA” discussed the role of the state in providing quality education to its citizens. It also discussed how quality in higher education has been defined in different ways, often as “excellence” or “fitness for purpose”, but also as “transformation” of stakeholders, especially for mature institutions.⁵

Taking these important elements as bases, CHED defines quality as the *“alignment and consistency of the learning environment with the institution’s vision, mission, and goals demonstrated by exceptional learning and service outcomes and the development of a culture of quality.”⁶*

Quality, thus, is premised on the HEIs’ ideals and on their commitment to achieve them while involving their respective organizations in the process. This kind of commitment is translated into having a mindset for QA which is *“about ensuring that there are mechanisms,*

¹ CMO No. 46, series 2012, *Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA*, Section 11, p. 4.

² *Primer on the Quality Assurance and Institutional Sustainability Assessment of HEIs*, Annex 4 of Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA, p. 14.

³ *Ibid.*, p. 15.

⁴ *Ibid.*, p. 14.

⁵ Harvey, L. and Green, D. (1993), “Defining quality”, *Assessment and Evaluation in Higher Education*, 18(1): 9-34.

⁶ CMO No. 46, series 2012, *Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA*, Section 6, p. 3.

procedures and processes in place to ensure that the desired quality, however defined and measured, is delivered.”⁷

“The internal capacity of HEIs to translate policy into quality programs and quality results depends on established internal QA systems. The starting point of QA is the articulation of the desired quality outcomes, set within the context of the HEI’s Vision, Mission, and Goals (VMG).”⁸

The VMG can be stated in operational terms as the HEIs’ *institutional outcomes* (i.e., attributes of ideal graduates and desired impact on society) that would serve as the foundation for the development of a proper learning environment (i.e., teaching-learning and support systems). It is important to note that the learning environment needs to be focused on developing the attributes of the HEIs’ ideal graduates.

This then is CHED’s definition of *outcomes-based education*: it is an approach that focuses and organizes the educational system around what is essential for all learners to know, value, and be able to do to achieve the desired level of competence. Thus, this kind of teaching-learning system will have its appropriate assessment of student performance.

The HEI’s management systems are set up to support its goals and strategies. There should be appropriate assessment tools to measure performance and to check if the mechanisms, procedures, and process actually deliver the desired quality. Such systems and processes, when properly implemented could lead to quality outcomes as well as sustainable programs and initiatives (refer to Figure 1). QA systems then “*look at institutional performance in terms of the HEI’s capacity to translate policy (in terms of VMG) into quality programs and quality results.*”⁹

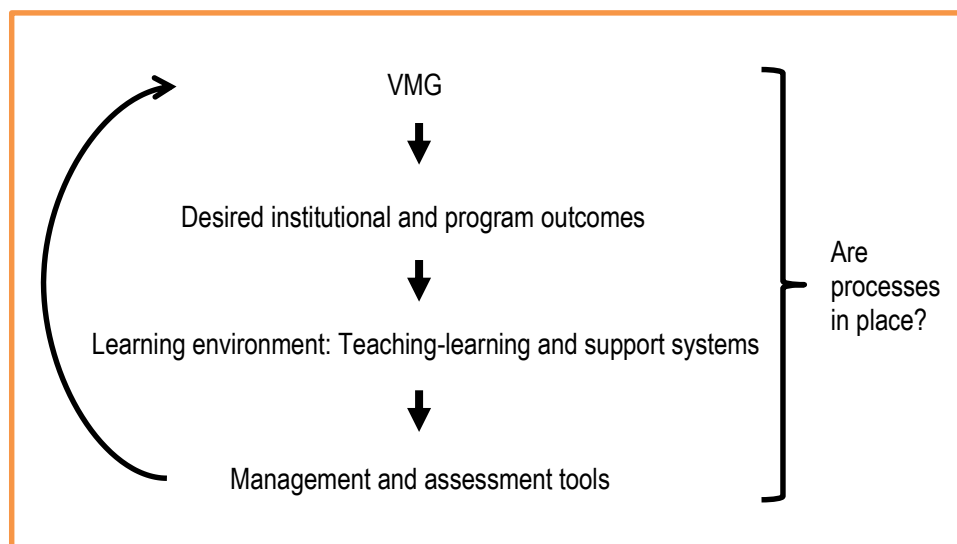


Figure 1. Outcomes-Based Quality Assurance

In the context of CHED, these internal QA systems should focus on programs and institutional processes. These should also look into the cycle of planning, implementation, assessment, and transformation (refer to Figure 2, adapted from CMO No. 46, series 2012).¹⁰

⁷ Ibid., Section 7, p. 3.

⁸ *Primer on the Quality Assurance and Institutional Sustainability Assessment of HEIs*, Annex 4 of Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA, p. 14.

⁹ Ibid., p. 16

¹⁰ Deming, W. E. (1986). *Out of the Crisis*. Massachusetts: Massachusetts Institute of Technology Press, p. 88.

Moreover, “QA can be carried out with the help of external agencies, like CHED and the accrediting bodies. The role of CHED is to oversee a rational and cohesive system that promotes quality according to the typology of HEIs. This recognizes that different types of HEIs have different requirements in terms of the qualifications and corresponding desired competencies of their graduates, their programs, the qualifications of their faculty, their learning resources and support structures, and the nature of their linkages and outreach activities.”¹¹

“This also means that CHED will have different incentives depending on the type of HEI, and programs of recognition within each type, e.g., autonomous and deregulated status, and Centers of Excellence (COEs) and Centers of Development (CODs).”¹²

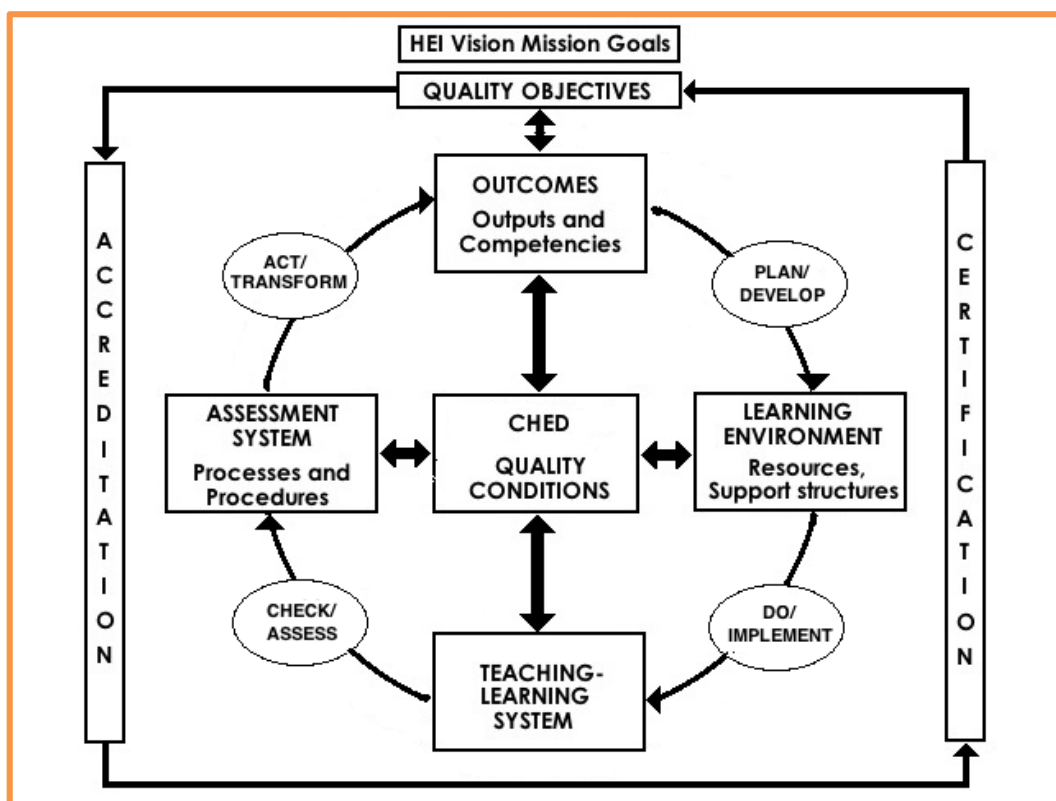


Figure 2. Outcomes-Based Framework for Higher Education

CHED is adopting an *outcomes-based approach* to assessment (including monitoring and evaluation) because of its potential “to greatly increase both the effectiveness of the QA system, and the quality, efficiency, and effectiveness of higher education.”¹³ There is a need to demonstrate that the achievement of outcomes matches international norms. The Philippine Qualification Framework (PQF) was designed to make our system more aligned with these norms, including the Association of Southeast Asian Nations (ASEAN) Qualifications Reference Framework, Washington Accord for engineering, Seoul Accord for information technology, Canberra Accord for architecture; and the Seaman’s Training Certification Watchkeeping (STCW) for maritime.

¹¹ CMO No. 46, series 2012, *Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA*, Section 9, p. 3

¹² *Primer on the Quality Assurance and Institutional Sustainability Assessment of HEIs*, Annex 4 of Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA, p. 16.

¹³ CMO No. 46, series 2012, *Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA*, Section 14, p. 4.

Increasingly, these agreements are made among accrediting bodies and the government is entering into Mutual Recognition Agreements (MRAs) with ASEAN. These allow for global mobility (e.g., for studies and employment) and competitiveness of graduates in whatever industry they are involved in. This can be achieved through quality tertiary education, thus, CHED is interested in developing the systems that would help the country produce the best professionals and more competitive Philippine-based companies.

“Mature evaluation systems are based upon outcomes, looking particularly into the intended, implemented, and achieved learning outcomes. Inputs and processes remain important, as they shape the learning experience that is made available to students.”¹⁴

“CHED adopts two different approaches to outcomes-based evaluation of programs and of institutions.”¹⁵

Approach 1: *“A direct assessment of educational outcomes, with evaluation of the individual programs that lead to those outcomes.”¹⁶ “This can provide a basis for program accreditation.”¹⁷*

Approach 2: *“An audit of the quality systems of an institution, to determine whether these are sufficiently robust and effective to ensure that all programs are well designed and deliver appropriate outcomes. Such an audit will not normally make direct judgments on academic programs, but it will consider program-level evidence to the extent necessary to establish that institutional systems are functioning properly.”¹⁸ “This can provide a basis for institutional accreditation.”¹⁹*

“A move to outcomes-based evaluation from an evaluation system based more on inputs represents a shift to a review process that is more reflective, e.g., asking the HEI to provide justification for their initiatives and chosen strategies, in view of its VMG and desired outcomes. Factual data are still required to support the HEI’s effective performance but not as an end in itself. This approach is less prescriptive, and gives the institution the opportunity to propose solutions that is more fitting to its VMG, culture, and context.”²⁰

This handbook discusses horizontal and vertical typologies of HEIs since their type will be the bases of their quality outcomes (refer to Part II). It also serves as a guide to HEIs on how to implement outcomes-based education (refer to Part III) and outcomes-based quality assurance, specifically institutional sustainability assessment (refer to Part IV). It also contains definitions of terms that are relevant to quality, quality assurance, outcomes-based education, among others (refer to Part V).

¹⁴ *Primer on the Quality Assurance and Institutional Sustainability Assessment of HEIs*, Annex 4 of Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA.

¹⁵ CMO No. 46, series 2012, *Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA*, Section 16, p. 5.

¹⁶ *Ibid.*

¹⁷ *Primer on the Quality Assurance and Institutional Sustainability Assessment of HEIs*, Annex 4 of Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA.

¹⁸ CMO No. 46, series 2012, *Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA*, Section 16, p. 5.

¹⁹ *Primer on the Quality Assurance and Institutional Sustainability Assessment of HEIs*, Annex 4 of Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA.

²⁰ *Ibid.*

PART II – HORIZONTAL AND VERTICAL TYPOLOGIES

Quality is premised on the:

- 1) alignment and consistency of the learning environment with the HEI's VMG;
- 2) demonstration of exceptional learning and service outcomes; and
- 3) development of a culture of quality.

The first element is related to the horizontal type of the HEI while the last two are related to *level of program excellence* and *institutional quality*.

Program excellence is manifested through accreditation, Centers of Excellence and Development, and international certification.

Institutional quality is manifested through institutional accreditation, Institutional Sustainability Assessment (ISA), or other evidences in the areas of governance and management; quality of teaching and learning; quality of professional exposure, research, and creative work; support for students; and relations with the community.²¹

Furthermore, the maturity of the HEI's internal QA system can be seen in the institutionalization and documentation of systems or processes in the HEI, the extent of implementation of these systems or processes, and the quality outcomes that contribute to program excellence.

The overall quality is reflected in the vertical typology of the HEI as:

- *Autonomous HEI (by Evaluation)*,
- *Deregulated HEI (by Evaluation)*, or
- *Regulated HEI*.

CHED recognizes that particular types of HEIs will respond fittingly to particular global and national challenges, and thus can be autonomous or deregulated in view of their horizontal type, namely *Professional Institution*, *College*, or *University*.

Although the mandates of the types are *not mutually exclusive*, they provide focus for the HEI, especially in the use of resources. They are differentiated through features in their desired competency of graduates, kinds of academic and co-curricular programs, qualification of faculty, learning resources and support structures, and the nature of their linkages and outreach activities.

²¹ Evidences in the five KRAs would be considered in the interim. There is a further recommendation to allow accrediting agencies to use this instrument in parts or en toto.

Choosing Your Horizontal Type

As described in CMO No. 46, series 2012, the different horizontal types have different roles to play in the national development of the Philippines.

“Professional Institutions contribute to nation building by providing educational experiences to develop technical knowledge and skills at the graduate and undergraduate levels, which lead to professional practice, e.g., Engineering, Medicine, Law, IT, Management, Teacher Education, Maritime Education). Professional Institutions develop adults who will have the technical and practical know-how to staff the various professional sectors that are required to sustain the economic and social development of the country and the rest of the world, as well as to contribute to innovation in their respective areas.”²²

In line with this mandate, Professional Institutions should have:²³

- 1) Full-time permanent faculty members who have the relevant degrees as required by CHED, as well as professional licenses and/or professional experience in the subject areas they handle;
- 2) Degree programs in professional fields that develop graduates with specialized skills;
- 3) Learning resources and support structures that are appropriate for developing professional knowledge and skills, including laboratories, practicum sites or internship programs, linkages with the relevant professional sectors, etc.;
- 4) Sustained program linkages with relevant industries, professional groups, and organizations that support the professional development programs; and
- 5) Outreach programs involving all students in social-development oriented experiences that allow them to develop the service orientation in their professions.

“Colleges contribute to nation building by providing educational experiences to develop adults who have the thinking, problem solving, decision-making, communication, technical, and social skills to participate in various types of employment, development activities and public discourses, particularly in response to the needs of the communities they serve. In order to attain its mandate, Colleges should have:”²⁴

- 1) Full time permanent faculty members who have the relevant graduate degrees as required by CHED and/or experience in the subject areas they handle;
- 2) Degree programs characterized by a core curriculum that holistically develops thinking, problem solving, decision-making, communication, technical, and social skills in line with the mission of the College;
- 3) Learning resources and support structures that are appropriate for developing knowledge and skills in the specific natural science, social science, humanities, and professional disciplines offered by the college, including laboratories, books and journals, etc.;
- 4) Links with the community that would ensure the development of relevant academic and extension programs as well as the application of their learning outcomes; and

²² CMO No. 46, series 2012, *Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA*, Section 23, p. 7.

²³ Ibid., Section 23.1, p. 7.

²⁴ Ibid., Section 23.2, pp. 7 – 8.

- 5) *Outreach programs involving students in social-development oriented experiences that allow them to contextualize their knowledge within actual social and human experiences.*

“Universities contribute to nation building by providing highly specialized educational experiences to train experts in the various technical and disciplinal areas and by emphasizing the development of new knowledge and skills through research and development. The focus on developing new knowledge is emphasized from the basic post-secondary (i.e., baccalaureate) academic programs through the doctoral programs; thus, a research orientation is emphasized in the Bachelor, Master’s and doctoral degree programs. Universities contribute to nation building by producing experts, knowledge, and technological innovations that can be resources for long-term development processes in a globalized context. In order to attain its mandate, Universities should have:”²⁵

- 1) *Faculty members with relevant degrees in their areas of specialization as required by CHED, and who participate in research and development activities in their respective disciplines as evidenced by refereed publications, and other scholarly outputs;*
- 2) *A comprehensive range of degree programs in all levels, from basic post-secondary to doctoral programs;*
- 3) *Viable research programs in specific (disciplinal and multidisciplinary) areas of study that produce new knowledge as evidenced by refereed publications, citations, inventions and patents, etc.;*
- 4) *Comprehensive learning resources and support structures (e.g., libraries, practicum laboratories, relevant educational resources, and linkages with the relevant disciplinal and professional sectors) to allow students to explore basic, advanced, and even cutting edge knowledge in a wide range of disciplines or professions;*
- 5) *Links with other research institutions in various parts of the world that would ensure that the research activities of the university are functioning at the current global standards; and*
- 6) *Outreach activities that allow the students, faculty, and research staff to apply the new knowledge they generate to address specific social development problems, broadly defined.*

²⁵ Ibid., Section 23.3, p. 8.

Operational Criteria for the Different Horizontal Types

The following operational criteria should guide the HEI as to which data it needs to prepare in order to be typed as a Professional Institution, College, or University.

To be typed as a Professional Institution:²⁶

- 1) *At least 70% of the enrollment (graduate and undergraduate levels) is in degree programs in the various professional areas²⁷ ...*
- 2) *At least 60% of the academic degree program offerings are in the various professional areas ... and have enrollees.*
- 3) *There should be a core of permanent faculty members. Until 2017, at least 50% of full time permanent faculty members have the relevant degrees as required by CHED ... as well as professional licenses (for licensed programs) and/or professional experience in the subject areas they handle, ... All other faculty should have the relevant degrees, professional licenses (for licensed programs), and/or professional experience in the subject areas they handle (e.g. in the event a professional institute has doctoral programs, all faculty members teaching in these programs must have doctoral degrees).*
- 4) *Learning resources and support structures are appropriate to the HEI's technical or professional programs.*
- 5) *There are sustained program linkages with relevant industries, professional groups and organizations that support the professional development programs. Outreach programs develop in students a service orientation in their professions.*

These minimum requirements for Professional Institutions should be reviewed by 2017, to determine if these are responsive to the development needs of the country.

To be typed as a College:²⁸

- 1) *At least 70% of undergraduate programs have a core curriculum that develops thinking, problem solving, decision-making, communication, technical, and social skills in line with the College's mission ...*
- 2) *There should be a core of permanent faculty members. Until 2017, at least 50% of the full time permanent faculty members have the relevant degrees as required by CHED in the subjects they handle All other faculty should have the relevant degrees as well as licenses (for licensed programs), and/or experience in the subject areas they handle (e.g. In the event the college has doctoral programs, all faculty members teaching in these programs must have doctoral degrees).*
- 3) *Learning resources and support structures are appropriate for the HEIs' programs.*

²⁶ *Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA. Section 5.3.1, p. 18.*

²⁷ Examples: Engineering, Health, Medicine, Law, Teacher Education, Maritime, Information Technology, Management, Communication, Agriculture, Forestry, and Fisheries, among others.

²⁸ *Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA. Section 5.3.2, p. 19.*

- 4) *Outreach programs in the relevant geographic or special communities towards which the College mission is oriented allow students to contextualize their knowledge within actual social and human experiences.*

These minimum requirements for Colleges should be reviewed by 2017, to see if these are responsive to the development needs of the country.

To be typed as a University:²⁹

- 1) *The presence of graduate students manifests the training of experts, who will be involved in professional practice and/or discovery of new knowledge.*
- 2) *Academic degree programs should be comprehensive and manifest the pursuit of new knowledge.*
- 3) *There are at least twenty (20) active academic degree programs with enrollees, at least six of which is at the graduate level.*
- 4) *There is at least one doctoral program in three different fields of study³⁰ (disciplines or branches of knowledge) with enrollees.*
- 5) *All graduate programs and at least 50% of baccalaureate programs require the submission of a thesis/project/or research papers.*
- 6) *There should be a core of permanent faculty members. All full-time permanent faculty members and researchers have the relevant degrees as required by CHED. ... All faculty members teaching in the doctoral programs have doctoral degrees. All other faculty should have the relevant degrees, professional licenses (for licensed programs), and/or relevant experience in the subject areas they handle.*
- 7) *At least thirty (30) full-time faculty members or 20% of all full-time faculty, whichever is higher, are actively involved in research.*
- 8) *Any one of these conditions:*
 - 8.1 *Annual research cost expenditure for the past five years is equivalent to at least PhP75,000 x the number of faculty members involved in research³¹; or*
 - 8.2 *At least 5% of full-time faculty members engaged in research have patents, articles in refereed journals, or books published by reputable presses in the last ten years³²*
- 9) *Comprehensive learning resources and support structures allow students to explore basic, advanced, and even cutting edge knowledge in a wide range of field of study/disciplines or professions.*
- 10) *Links with other research institutions in various parts of the world ensure that the research activities of the university are functioning at the current global standards.*

²⁹ Ibid., Section 5.3.3, pp. 19 – 21

³⁰ For purposes of this CMO, field of study refers to recognized areas of specialization within a discipline (IACES and NSCB, 2006, p. 33). Given this definition, the comprehensiveness of a university may be gauged from the existence of programs representing a range of disciplines in different branches of knowledge; different disciplines within a branch of knowledge; or different recognized fields of study within a discipline.

³¹ Including external grants, monetary value of research load of faculty members, equipment, and similar expenses credited to research.

³² Includes the CHED-accredited journals.

- 11) Outreach activities allow the students, faculty, and research staff to apply the new knowledge they generate to address specific social development problems, broadly defined.

These minimum requirements for Universities – particularly the numbers and percentages pertaining to academic degree programs, faculty, and costs – should be reviewed by 2017, to see if these are responsive to the development needs of the country.

HEIs recognized as universities before the establishment of CHED or granted such status by the Commission will retain their status unless they choose to be classified differently along the horizontal typology.

Furthermore, the lead university for HEIs that are recognized as university system status ought to meet the requirements for university by 2014. By 2017, the system as a whole must meet the 2017 requirement for university status.

To facilitate the gathering of data of the HEIs, a template (in MS Excel format) is available for download at the CHED website. Although this may seem overwhelming at first, the data will provide the HEI with basic information that it can use for effective strategic management. Most of the data asked for are also data that accrediting agencies and applications for COE/COD may require.

Vertical Classification as a Measure of Quality

As mentioned earlier, the overall quality is reflected in the vertical typology of the HEI.

“Autonomous HEIs (by Evaluation) demonstrate exceptional institutional quality and enhancement through internal QA systems, and demonstrate excellent program outcomes through a high proportion of accredited programs, the presence of Centers of Excellence (COE) and/or Development (COD), and/or international certification. In particular, they show evidence of outstanding performance consistent with their horizontal type, e.g., research and publications for universities; creative work and relevant extension programs for colleges; and employability or linkages for professional institutes.

Deregulated HEIs (by Evaluation) demonstrate very good institutional quality and enhancement through internal QA systems, and demonstrate very good program outcomes through a good proportion of accredited programs, the presence of COEs/CODs, and/or international certification. In particular, they show evidence of very good performance consistent with their horizontal type.

Regulated HEIs are those institutions, which still need to demonstrate good institutional quality and program outcomes.”³³

“Vertical classification is based on the assessment of the HEI’s **Commitment to Excellence** and **Institutional Sustainability and Enhancement**. Commitment to Excellence mainly considers program excellence while Institutional Sustainability and Enhancement is largely based on institutional quality.”³⁴

³³ CMO No. 46, series 2012, *Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA*, Section 25, p. 9.

³⁴ Ibid., Section 26, pp. 9 – 10.

A maximum of 70 percentage points is awarded for Commitment to Excellence (refer to Table 1) while a maximum of 30 percentage points is awarded for Institutional Sustainability and Enhancement (refer to Table 2).³⁵

Program Excellence

Table 1 shows the criteria and corresponding point system for Commitment to Excellence which include the presence of COEs and/or CODs, program accreditation (local/international), and international program certification.³⁶

Commitment to Excellence cannot be fully manifested using just one criterion. Ideally, points from at least two criteria are needed to get the maximum points.

Points for local accreditation (refer to Annex 1) are obtained using the proportion of accredited programs to the total number of programs that can be accredited, as well as the level of accreditation.

Thus, commitment to excellence is shown by the efforts of the HEI to have a good proportion of their programs accredited at a high level.

Table 1. Criteria for Commitment to Excellence (70%)

Criteria	No. of points	Max points that can be awarded
COE	10/COE	60
COD	5/COD	
Local accreditation	(Refer to Annex 1)	60
International accreditation (CHED recognized-mobility)	10/program	40
International certification	10/program	20

Institutional Sustainability and Enhancement

Table 2 shows the criteria and corresponding point system for Institutional Sustainability and Enhancement which include institutional accreditation, institutional certification (local/international), the Institutional Sustainability Assessment (ISA) and international institutional certification (such as ISO for institutions).³⁷

An HEI may accumulate more points for each area but only the maximum number of points will be awarded.

In the interim, in the absence of the suggested evidences, assessment can be made on the basis of additional evidence in the areas of Governance and Management, Quality of Teaching and Learning, Quality of Professional Exposure/Research/Creative Work, Support

³⁵ *Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA.* Section 6.3, p. 22.

³⁶ *Ibid.*, Section 6.3.1, p. 22.

³⁷ *Ibid.*, Section 6.4, p. 23.

for Students, and Relations with the Community, however, the points awarded for these evidences will be smaller than those given to HEIs that went through the formal processes.³⁸

After the interim, CHED will use the Institutional Sustainability Assessment (ISA) Framework (refer to Annex 2).

Table 2. Criteria for Institutional Sustainability and Enhancement (30%)

Criteria	No. of points	Max points that can be awarded
Institutional accreditation		30
<ul style="list-style-type: none"> • based on program accreditation³⁹ • using instrument for type-based institutional accreditation 	25 ⁴⁰ Points to be aligned with the ISA ⁴¹	
IQuAME (Categories from 2005-2010)	Category A: 30 Category B: 25	30
Institutional Sustainability Assessment ⁴²	Ave \geq 2.75 : 30 2.75 > Ave \geq 2.50 : 25 2.50 > Ave \geq 2.00 : 20 Six Sigma, Baldrige PQA	30
Institutional certification	ISO 2014: 25 ISO 9001: 20	25
Additional evidence (type-based): <ul style="list-style-type: none"> • Governance & Management • Quality of Teaching & Learning • Quality of Professional Exposure/ Research/ Creative Work • Support for Students • Relations with the Community 	Max 4/key result area	20

³⁸ Ibid., Section 6.4.1, p. 24.

³⁹ Program-based institutional accreditation is considered only for the transition period, i.e. May 2014-May 2015 when the HEIs renew/apply for autonomy and deregulation. For this period, it is assumed that these HEIs meet the minimum ISA scores. After the interim, accrediting agencies are recommended to have their own type-based institutional accreditation that may use elements of the CHED ISA. Their scores have to be harmonized with ISA. The accrediting agency makes a proposal of equivalences to CHED; approved equivalences may be used in the vertical classification by 2015 (for institutions seeking initial institutional accreditation) and by 2017 (for institutions seeking renewal of institutional accreditation).

⁴⁰ As accreditation bodies harmonize their criteria and develop institutional accreditation separate from program accreditation, "having a high number of accredited institutions" may be a criterion that will merit higher maximum points than 25.

⁴¹ Refer to Footnote 38.

⁴² Refer to Annex 2.

Autonomy and Deregulation

In the vertical classification, HEIs that accumulate 80 points may be classified as Autonomous (refer to Table 3) while those with a minimum of 65 points may be classified as Deregulated (refer to Table 4). The HEIs should also show type-based evidences, *which should already form part of the materials for COEs/CODs and/or accreditation*. Thus, most of these evidences should already be available to the HEIs. This further means that there can be Autonomous and Deregulated HEIs in the different horizontal types.

Note that CHED is using a “moving target” framework in both cases, in order to give time for HEIs to adjust to the new system before raising the bar for quality in 2017.

Table 3. Point System for **Autonomous** by Evaluation (Minimum of 80 points plus additional evidences)⁴³

Horizontal Type	Evidences by 2014	Evidences by 2017
Professional Institution	1. The Institutional Sustainability Score (e.g. ISA) or its equivalent ⁴⁴ ≥ 2.75 (see Annex 2).	1. The Institutional Sustainability Score or its equivalent ⁴⁵ ≥ 2.75 (see Annex 2).
	2. Any two of the following:	2. Any two of the following:
	a. At least one program with licensure, or 20% of the school's programs with licensure, whichever is higher, has a passing rate that is higher than the national passing rate ⁴⁶ in board/licensure exams, in the last five years.	a. At least one program with licensure, or 20% of the school's programs with licensure, whichever is higher, has a passing rate that is at least 1.1 times than the national passing rate in board/licensure exams, in the last three years .
	b. At least two programs are accredited under internationally agreed upon criteria and procedures, which promote professional mobility across national boundaries (e.g., accreditation under the terms of Washington Accord by ABET or by the PTC as a probationary member of said Accord, etc.)	b. At least two programs are accredited under internationally agreed upon criteria and procedures, which guarantee professional mobility across national boundaries (e.g., accreditation under the terms of Washington Accord by ABET or by the PTC as a full signatory of said Accord; Bologna Accord, etc.)
	c. Over the last five years, at least 80% of its graduates were employed within the first two years of graduation.	c. Over the last five years, at least 80% of its graduates were employed within the first two years of graduation.
	d. Sustained linkage with industry as evidenced by working program(s) that significantly contribute to the attainment of desired student learning outcomes and to the employability of its graduates.	d. Sustained linkage with industry as evidenced by working program(s) that significantly contribute to the attainment of desired student learning outcomes and to the employability of its graduates.

⁴³ Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA. Section 6.6, pp. 24 – 26.

⁴⁴ The score has to be harmonized with other accrediting systems. The accrediting agency makes a proposal of equivalences to CHED; approved equivalences may be used in the vertical classification by 2015 (for institutions seeking initial institutional accreditation) and by 2017 (for institutions seeking renewal of institutional accreditation).

⁴⁵ Refer to Footnote 44.

⁴⁶ For first time takers; the national passing rate (taken from PRC data) = total national passers in the set of programs offered by the HEI divided by total national takers in the set of programs offered by the HEI. The passing rate of the HEI = total HEI passers in the set of programs offered by the HEI divided by total HEI takers in the set of programs offered by the HEI.

Table 3. (con't)

Horizontal Type	Evidences by 2014	Evidences by 2017
College	1. The Institutional Sustainability Score or its equivalent ⁴⁷ ≥ 2.75 (Annex 2).	1. The Institutional Sustainability Score or its equivalent ⁴⁸ ≥ 2.75 (Annex 2).
	2. At least 80% of all graduates were required as students to participate in a community-based research/public service/ extension program for a cumulative period of two years.	2. At least 80% of all graduates were required as students to participate in a community-based research/public service/ extension program for a cumulative period of two years.
	3. Over the last five years, at least 20% of faculty members were engaged in research and extension services that contribute to instruction and/or community development.	3. Over the last five years, at least 20% of faculty members were engaged in research and extension services that contribute to instruction and/or community development.
University	1. The Institutional Sustainability Score or its equivalent ⁴⁹ ≥ 2.75 (Annex 2).	1. The Institutional Sustainability Score or its equivalent ⁵⁰ ≥ 2.75 (Annex 2).
	2. At least 50 full-time faculty members or at least 30% of full-time faculty, whichever is higher, have been actively engaged in scholarly work (research or creative work) in the last two years. (Evidence of this includes completed/progress reports, approved research grants, presentation at conferences, books and anthologies, and documented creative work.)	2. At least 50 full-time faculty members or at least 30% of full-time faculty, whichever is higher, have been actively engaged in scholarly work (research or creative work) in the last five years . (Evidence of this includes completed/progress reports, approved research grants, presentation at conferences, books and anthologies, and documented creative work.)
		3. At least 10% full-time faculty has patents or publications in refereed journals. Of these, at least 5% of full-time faculty has publications in internationally indexed journals and/or books published in reputable academic presses in the last five years.

⁴⁷ Refer to Footnote 44.⁴⁸ Refer to Footnote 44.⁴⁹ Refer to Footnote 44.⁵⁰ Refer to Footnote 44.

Table 4. Point System for Deregulated by Evaluation (Minimum of 65 points plus additional evidences)⁵¹

Horizontal Type	Evidences by 2014	Evidences by 2017
Professional Institution	1. The Institutional Sustainability Score (e.g. ISA) or its equivalent ⁵² ≥ 2.50 (see Annex 2).	1. The Institutional Sustainability Score or its equivalent ⁵³ ≥ 2.50 (see Annex 2).
	2. Any two of the following:	2. Any two of the following:
	a. At least one program with licensure, or 20% of the school's programs with licensure, whichever is higher, has a passing rate that is at least equal to the national passing rate ⁵⁴ in board/licensure exams, in the last five years.	a. At least one program with licensure, or 20% of the school's programs with licensure, whichever is higher, has a passing rate that is higher than the national passing rate in board/licensure exams, in the last three years .
	b. At least one program accredited under internationally agreed upon criteria and procedures, which promote professional mobility across national boundaries (e.g., accreditation under the terms of Washington Accord by ABET or by the PTC as a probationary member of said Accord; Bologna Accord, etc.).	b. At least one program is accredited under internationally agreed upon criteria and procedures, which guarantee professional mobility across national boundaries (e.g., accreditation under the terms of Washington Accord by ABET or by the PTC as a full signatory of said Accord; Bologna Accord, etc.).
	c. Over the last five years, at least 70% of its graduates were employed within the first two years of graduation.	c. Over the last five years, at least 70% of its graduates were employed within the first two years of graduation.
	d. Sustained linkage with industry as evidenced by working program(s) that significantly contribute to the attainment of desired student learning outcomes and to the employability of its graduates.	d. Sustained linkage with industry as evidenced by working program(s) that significantly contribute to the attainment of desired student learning outcomes and to the employability of its graduates.
College	1) The Institutional Sustainability Score or its equivalent ⁵⁵ ≥ 2.50 (Annex 2).	1. The Institutional Sustainability Score or its equivalent ⁵⁶ ≥ 2.50 (Annex 2).
	2. At least 70% of all graduates are required to participate in a community-based extension program for a cumulative period of two years.	2) At least 70% of all graduates are required to participate in a community-based extension program for a cumulative period of two years.
	3) Over the last five years, at least 15% of faculty members were engaged in research and extension service that contributes to instruction and/or community development.	3. Over the last five years, at least 15% of faculty members were engaged in research and extension service that contributes to instruction and/or community development.

⁵¹ *Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA.* Section 6.6, pp. 26 – 27.

⁵² Refer to Footnote 44.

⁵³ Refer to Footnote 44.

⁵⁴ Refer to Footnote 46.

⁵⁵ Refer to Footnote 44.

⁵⁶ Refer to Footnote 44.

Table 4. (con't)

Horizontal Type	Evidences by 2014	Evidences by 2017
University	1. The Institutional Sustainability Score or its equivalent ⁵⁷ ≥ 2.50 (Annex 2).	1. The Institutional Sustainability Score or its equivalent ⁵⁸ ≥ 2.50 (Annex 2).
	2. At least 30 full-time faculty members or at least 25% of full-time faculty, whichever is higher, have been actively engaged in scholarly work (research or creative work) in the last five years.	2. At least 30 full-time faculty members or at least 25% of full-time faculty, whichever is higher, have been actively engaged in scholarly work (research or creative work) in the last five years.
		3. At least 7% full-time faculty has patents or publications in refereed journals.

It must be noted that vertical typology of the HEI requires that it states its horizontal type as seen in the point system. The triple role of the HEI (i.e., instruction, research, and outreach) can still be achieved, but the extent and manner to which this is done depends on the mission of the HEI.

This emphasizes that the *“operationalization of the horizontal typology do not mean that they are mutually exclusive to the HEI type, e.g. colleges and universities may offer professional programs, professional institutions and universities may have their own core curricula; professional institutions and colleges may conduct research associated with the scholarship of discovery.”*⁵⁹ The differences therefore lie on the focus and thrust of the HEI.

Furthermore, HEIs that wish to qualify for Autonomous or Deregulated status should highlight type-based evidences, which are already part of the materials submitted for COEs/CODs and/or accreditation.

⁵⁷ Refer to Footnote 44.

⁵⁸ Refer to Footnote 44.

⁵⁹ *Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA.* Section 5.1.3.8, p. 17.

PART III – OUTCOMES-BASED EDUCATION

“CHED is committed to developing competency-based learning standards that comply with existing international standards when applicable (e.g. outcomes-based education for fields like engineering and maritime education) to achieve quality and enable a more effective integration of the intellectual discipline, ethos and values associated with liberal education.”⁶⁰

CHED defines *outcomes-based education* (OBE) as an approach that focuses and organizes the educational system around what is essential for all learners to know, value, and be able to do to achieve a desired level of competence. OBE is “*open to incorporating discipline-based learning areas that currently structure HEI curricula.*”⁶¹

For the HEIs, this means describing the attributes of their ideal graduates based on their visions and missions as part of their *institutional goals or outcomes*, and using these as bases for developing specific program outcomes.

Program outcomes are the sets of competencies (related knowledge, skills, and attitudes) that all learners are expected to demonstrate. Institutional or program outcomes may also emphasize lifelong learning. For instance, HEIs could describe the attributes of their ideal graduates which they expect to see five years after graduation.

These desired outcomes have to be translated to what the students learn in specific courses. The HEI should ensure that at the level of the courses, the desired course and learning outcomes are attained with the proper content, methodologies, and student performance assessment (refer to Figure 3).

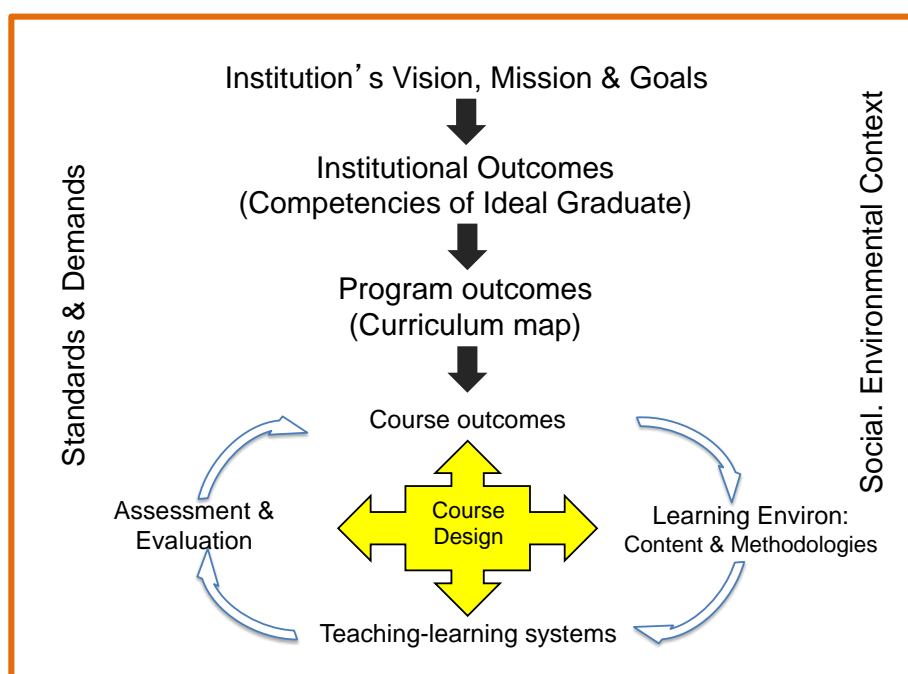


Figure 3. Framework for Outcomes-based Education

⁶⁰ CMO No. 46, series 2012, *Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-Based and Typology-Based QA*, Section 13, p. 4.

⁶¹ *Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA*. Section 3.1.4.3, p. 12.

Course outcomes refer to the knowledge, values, and skills all learners are expected to demonstrate at the end of a course. **Learning outcomes** may result from a specific lesson, although it is sometimes used interchangeably with course outcomes. Thus, in the hierarchy, learning outcomes are seen as building blocks toward course outcomes, which in turn, support the program outcomes.

Implementing OBE further translates to the quality and orientation of the faculty members in charge of the courses. This may be more crucial than a total change of systems and structures, that is, education managers and faculty internalize the attitude that the core mission of teaching HEIs is to build the learning competencies and the ability to continuously learn of the students, as well as to mobilize resources and methods, including conventional pedagogies (e.g., lectures), that would enhance learning.⁶²

In the OBE paradigm, there is a shift in the focus of education from an inputs-based, teacher-centered “instruction” paradigm to an outcomes-based, learner-centered educational paradigm. Table 5 shows the difference between these two paradigms.

Table 5. Ideal Typical Depiction of Inputs-based and Outcomes-based Education Paradigms⁶³

Dimension	The Instruction (Inputs-Based) Paradigm	The Learning (Outcomes-Based) Paradigm
Mission and Purposes	• Provide/deliver instruction	• Produce learning
	• Transfer knowledge from faculty	• Elicit student discovery towards construction of knowledge
	• Offer courses and programs	• Create powerful learning environments
	• Improve the quality of instruction	• Improve the quality of learning
	• Achieve access for diverse students	• Achieve success for diverse students
Criteria for Success: Learning varies with ...	• Inputs/Resources	• Learning and student success outcomes
	• Quality of entering students	• Quality of exiting students
	• Curriculum development, expansion	• Learning technologies development
	• Quantity and quality of resources	• Quantity and quality of outcomes
	• Enrolment and revenue growth	• Aggregate learning growth, Efficiency
	• Quality of faculty, instruction	• Quality of learning
Teaching/Learning Structures	• Atomistic, parts prior to whole	• Holistic, whole prior to parts
	• Time held constant, learning varies	• Learning held constant, time varies
	• 50-minute lecture, 3-unit course	• Learning environments
	• Classes start, end at same time	• Environment ready when student is
	• One teacher, one classroom	• Whatever learning experience works
	• Independent discipline/ departments	• Cross disciplines/department
	• Covering material/content	• Specified learning results
	• End of course assessment	• Pre-during and post-assessment
	• Grading within classes by instructors	• External evaluation of learning
	• Private assessment	• Public assessment
	• Degree equals accumulated credit hours	• Degree equals demonstrated knowledge and skills

⁶² Task Force on Quality Assurance (TFQA) Report, October 2011.

⁶³ Barr, R. and Tagg, J. (1995). “Teaching to Learning: a New Paradigm for Undergraduate Education,” *Change*, November/December, pp. 13 – 25.

Table 5. (con't)

Dimension	The Instruction (Inputs-Based) Paradigm	The Learning (Outcomes-Based) Paradigm
Learning Theory	<ul style="list-style-type: none"> Knowledge “exists out there” 	<ul style="list-style-type: none"> Knowledge exists in each person's mind and is shaped by experience
	<ul style="list-style-type: none"> Knowledge comes in chunks and bits; delivered by instructors and gotten by students 	<ul style="list-style-type: none"> Knowledge is constructed, created
	<ul style="list-style-type: none"> Learning is cumulative and linear 	<ul style="list-style-type: none"> Learning is a nesting and interacting of frameworks
	<ul style="list-style-type: none"> Fits the storehouse of knowledge metaphor 	<ul style="list-style-type: none"> Fits learning how to ride a bicycle metaphor
	<ul style="list-style-type: none"> Learning is teacher-centered and controlled 	<ul style="list-style-type: none"> Learning is learner-centered and learner-controlled
	<ul style="list-style-type: none"> “Live” teacher, “live” student required 	<ul style="list-style-type: none"> “Active” learner required but not “live” students required
	<ul style="list-style-type: none"> The classroom and learning are competitive and individualistic 	<ul style="list-style-type: none"> Learning environments and learning are cooperative, collaborative and supportive
	<ul style="list-style-type: none"> Talent and ability are rare 	<ul style="list-style-type: none"> Talent and ability are abundant
Productivity/ Funding	<ul style="list-style-type: none"> Definition of productivity: cost per hour of instruction per student 	<ul style="list-style-type: none"> Definition of productivity: cost of unit of learning per student
	<ul style="list-style-type: none"> Funding for hours of instruction 	<ul style="list-style-type: none"> Funding for learning outcomes
Nature of Roles	<ul style="list-style-type: none"> Faculty are primarily lecturers 	<ul style="list-style-type: none"> Faculty are primarily designers of learning methods and environments
	<ul style="list-style-type: none"> Faculty and students act independently and in isolation 	<ul style="list-style-type: none"> Faculty and students work in teams with each other and with other staff
	<ul style="list-style-type: none"> Teachers classify and sort students 	<ul style="list-style-type: none"> Teachers develop every student's competencies and talents
	<ul style="list-style-type: none"> Staff serve, support faculty and the process of instruction 	<ul style="list-style-type: none"> All staff are educators who produce student learning and success
	<ul style="list-style-type: none"> Any expert can teach 	<ul style="list-style-type: none"> Empowering learning is challenging and complex
	<ul style="list-style-type: none"> Line governance/independent actors 	<ul style="list-style-type: none"> Shared governance, teamwork independent actors

This paradigm shift has implications on the management of educational processes.⁶⁴ While supply-side factors, inputs, access issues and investment efforts are important, OBE focuses on learning outcomes at the institutional, program, and course levels; the social demand for education; and the results and impact of educational processes and system efficiency (refer to Table 6).

⁶⁴ Tawil, S., Abdeljalil, A., and Macedo, B. (2011). “Beyond the Conceptual Maze: The Notion of Quality in Education.” *ERF Discussion Papers*. Paris: UNESCO Education Research and Foresight No. 2.

Table 6. Changing Educational Paradigms and their Implication for Education Management and Planning⁶⁵

Education Management and Planning Focus on	Education Management and Planning Concerned with
Quantitative approach	Qualitative dimensions
Supply	Demand
Access	Equity and Relevance
Inputs	Results and Impact
Investment Effort	System efficiency

It is also important to note that *assessment* plays a very important role in OBE. Assessment drives OBE, and conventional methods are usually not sufficient to assess the achievement of desired outcomes.

As mentioned earlier, in the initial report of the Task Force on Quality Assurance (October 2011), the core mission of teaching HEIs is to build the learning competencies of students and their ability to continuously learn as well as to mobilize resources and methods, including traditional pedagogies (e.g., lectures), that would enhance learning.

If the spirit of this mission is imbibed, HEIs and CHED will find it easier to discern, in the specific contexts they are operating in, which elements of the instruction paradigm they have to change and which they can work with and bend to produce positive learning outcomes.

Determining Program Outcomes

Aligning with the HEI's VMG

The vision and mission of an HEI should determine its institutional goals or outcomes, i.e., the kind of graduates it produces and the impact it has on society. Therefore, before an HEI can meaningfully discuss its program outcomes, it is important that the attributes of its ideal graduates are articulated and used as a foundation for outcomes at different levels of learning. The outcomes are the ends while the educational structures and curricula are the means in attaining these outcomes.

Thus, planners should be able to imagine and describe the competencies, qualities, and values they envision their graduates should have by the end of their stay in the HEI. These performance indicators would then be the bases of the design of academic and non-academic programs (such as programs for student support, faculty development, extension programs, etc.), the learning resources to support the programs, the faculty profile, and the overall school environment.

While an HEI has an overall picture of its graduates, academic programs are designed to develop specific sets of competencies (knowledge, skills, and attitudes). Therefore, we

⁶⁵ Adapted with permission from Figure 1 of the UNESCO draft paper of Tawil et. al. (2011), as it appears in the report of TFQA (October 2011).

speak of desired *program outcomes* which are more specific to the program of study and clearly aligned with the institutional goals.

Using PSGs as Guide to Determining Program Outcomes

CHED's new Policies, Standards, and Guidelines (PSGs) have been rewritten to reflect the minimum program outcomes that are:

- 1) common to all programs in all types of schools,
- 2) common to the discipline,
- 3) specific to a sub-discipline and a major, and
- 4) common to a horizontal type as defined in CMO No. 46, series 2012.

Thus, while these PSGs may be used as guide, an HEI may incorporate program outcomes that are unique in the context of its horizontal type as well as its vision and mission.

For example, the program outcomes common to all disciplines and types of schools may very well reflect some of the attributes of the HEI's ideal graduate, namely, the ability to:

- a) articulate and discuss the latest developments in the specific field of practice⁶⁶.
- b) effectively communicate orally and in writing using both English and Filipino.
- c) work effectively and independently in multi-disciplinary and multi-cultural teams⁶⁷.
- d) act in recognition of professional, social, and ethical responsibility.
- e) preserve and promote "*Filipino historical and cultural heritage*"⁶⁸.

Using HEI Type

Some program outcomes are based on HEI type because this determines the focus and purpose of the HEI. For example:

- Graduates of professional institutions demonstrate a service orientation in one's profession.
- Graduates of colleges participate in various types of employment, development activities, and public discourses, particularly in response to the needs of the communities one serves.
- Graduates of universities participate in the generation of new knowledge or in research and development projects.
- Graduates of State Universities and Colleges must, in addition, have the competencies to support "national, regional and local development plans"⁶⁹.

⁶⁶ PQF Level 6 Descriptor

⁶⁷ Ibid.

⁶⁸ Based on Republic Act 7722, *The Higher Education Act of 1994*

⁶⁹ Ibid.

Thus, a psychology graduate from different institutions will demonstrate common attributes, which are also measured through the licensure examinations. A psychology graduate from a professional institution is expected to clearly demonstrate service orientation in the professional practice. A psychology graduate from a college is expected to be more attuned to respond to needs of a community (geographic, sectoral, or sectarian). And a psychology graduate from a university is expected to be more prepared to do research and development projects.

Other desired attributes of the HEI's ideal graduate could be added, based on their mission and vision or on the core values of the institution. For example, this could include "reflect and act in accordance with one's faith" for some sectarian colleges, or "analyze and discuss different schools of thought" for universities.

Aside from the attributes of its ideal graduate, another institutional outcome would be the HEI's impact to society. Again, this can be in the context of the HEI type.

Program outcomes begin with the end in mind: What are the attributes of the graduates of a program?

The general attributes are the desired competencies, qualities, and values of the graduates. Thus, they are much bigger than skills, knowledge, or attitudes of the graduates. Sometimes, the attributes that immediately come to mind are the competencies. If so, determine how related competencies can be articulated as program outcomes. The component competencies can then become the performance indicators of the program outcome. Although this is not exactly in the spirit of OBE, which uses the principle of designing down, this might be helpful for HEIs that are just beginning their transition to OBE. Box 1 shows more examples of program outcomes by discipline.

Example 1: An attribute of an engineering graduate, which can be written as a program outcome, is:

Provide engineering solutions in the context of social, environmental and ethical considerations.

Note that the verb is active and can be observed/measured. Compare this with:

Understand engineering solutions in the context of social, environmental and ethical considerations.

The verb "understand" is difficult to observe/measure.

In this example, the program outcome has the following the performance indicators (further discussed in the following section):

- 1) To produce an Environmental Impact Assessment; and
- 2) To design engineering solutions according to legal requirements.

This shows that the program outcome is something bigger than its component competencies, which actually become the performance indicators of the program.

Example 2: Another example is the program outcome for English:

Communicate in oral and written English fluently, accurately, and creatively in diverse social, cultural, academic, and professional settings.

This program outcome is the combination of two competencies:

- 1) speak and write fluently, accurately, and creatively in English; and
- 2) assess the appropriate communication strategies in various social, cultural, academic, and professional settings.

These competencies are now the performance indicators of program outcome.

Box 1. Examples of Program Outcomes by Discipline

Determining Performance Indicators and Standards

Each academic degree program has a focus, and this is what program outcomes describe. They describe *what the graduate of that program can know, do and be*. These program outcomes can be broken down to component competencies, which are actually the *performance indicators* that will show a match between the desired or intended outcomes and the design and implementation of the learning experience.

These particular competencies will then have to be developed in the specific courses of the program. The courses, thus, will have specific learning outcomes that develop particular competencies (related knowledge, skills, and attitudes). **Knowledge** refers to information that one has stored through experience. **Skills** are demonstrable abilities. **Attitudes** refer to evaluative cognitions regarding things/activities, usually associated with positive or negative judgment. See Box 2 for examples of learning outcomes.

For example, a graduate of the psychology program is expected to be able to apply psychological theories and methods to social, organizational, or clinical contexts.

This is a very broad idea, and needs to be broken down to specific competencies, such as the ability to:

- 1) apply appropriate methods to identify the needs of a particular group or situation;
- 2) use psychological theories and methods to analyze problems and situations; and
- 3) use these theories and methods to identify suitable interventions to a situation.

These competencies are developed at different levels with different scopes, in the various courses of the program, such as introduction to psychology, social psychology, clinical psychology, organizational development, research methods, etc.

Each of these courses spells out its learning outcomes, identifying particular knowledge, skills, and attributes pertinent to the course.

For instance, the Introduction to Psychology could include in its learning outcomes the following (adapted from the APA Undergraduate Learning Goals and Outcomes):

- 1) Describe the nature of psychology as a discipline;
- 2) Discuss concepts in selected content areas of psychology – theory and research, history of psychology, relevant levels of analysis, overarching themes in psychology, and ethical issues;
- 3) Apply the concepts, language, and major theories of the discipline to explain psychological phenomena; and
- 4) Explain major perspectives of psychology.

For the course on Social Psychology, the learning outcomes could include:

- 1) Give examples of how the scientific method is used in social psychology, particularly the generation of hypotheses, evaluation of the hypothesis through experimentation, or through observational, correlational and survey methods;
- 2) Discuss the major theoretical perspectives in social psychology and the latest advances in the field; and
- 3) Apply concepts and methods to specific areas of interest.

Box 2. Examples of Learning Outcomes

Standards for the program and its component courses can also be defined, in terms of targeted levels of competencies. The HEI should check if there are national or international levels against which programs would be assessed. Based on these desired competencies and standards, administrators and teachers will design the learning environment, which includes the curricula, content, methodologies, and student assessment. This will be discussed in a subsequent section.

Indicators, Metrics, Targets

In order for the HEI to know if the desired program outcomes have been attained, it needs to set its indicators, metrics, and targets. In some literature these are used interchangeably, but for the sake of a common language, **indicators** correspond to the competencies (which should be specific, measurable, attainable, realistic, and time-bound); **metrics** refer to what will be measured, and **targets** refer to the desired value.

At the level of the institution, indicators would be the overall program outcomes.

For example:

- An attribute of the ideal graduates (an institutional goal) could be their ability to “apply their professional skills to become experts in their areas of specialization and expertise”.
- Metrics could include overall results of licensure examinations or employment rates of graduates, awards to the graduates or to the institution, or the HEI’s involvement in the development of local/regional/national policies.
- Targets refer to the desired standard, such as minimum values of 70% passing rate in licensure exams, 80% employment rate, an award per year, or involvement in the development of two local policies.

Each program outcome has performance indicators, which could also have been listed as the component competencies under each outcome.

For example:

- An HEI’s engineering graduates are expected to “provide engineering solutions in the context of social, environmental and ethical considerations.”
- Metrics could include completion of a capstone project or undergraduate thesis geared toward problem solving that contributes to professional practice, community concerns, or research.
- The targets refer to the desired standard, such as 100% completion of projects or thesis with 70% having an impact on the profession, community, or research.

At the level of the course, indicators are the achieved learning outcomes.

For example:

- After a course in Introduction to Psychology, students are expected to be able to “discuss concepts in selected content areas of psychology.”
- Metrics could include the completion of papers and particular levels of examinations.
- Targets would be desired standards, such as 100% completion with the average rating C+.

Designing the Learning Environment

The HEI's vision and mission and institutional goals are important input in designing the *learning environment*, which includes the pedagogical philosophy, the curriculum, modes of delivery, non-academic programs, support structures, and the overall approach to learning and assessment.

The **pedagogical philosophy** is the lens through which the learning environment is seen. The courses in the **curriculum** and their **mode of delivery** should contribute towards the achievement of program outcomes. **Non-academic programs** should develop other qualities and values to complement the academic programs. Learning resources and **support structures** enable and enhance the teaching-learning systems. Program assessment should improve the learning environment. The other details will follow if the major features are clear to everyone.

The learning environment should, therefore, be designed to produce the kind of ideal graduate of the HEI.

There are some suggestions to help the HEI ensure that it is able to achieve its institutional goals:

- 1) correlate the courses in the curriculum with the program outcomes,
- 2) shift to student-centered learning,
- 3) assess program outcomes and use the feedback to enhance the learning environment,
- 4) provide learning resources and support services, and
- 5) provide opportunities to broaden perspectives through community engagement.

Preparing a Curriculum Map

The new policies, standards and guidelines (PSGs) include a *sample* curriculum map which can indicate the extent to which the courses in the curriculum correspond to program outcomes.

The intended curriculum is the design of the degree program that will try to achieve the program outcomes. It should describe not only the courses but also major teaching, learning, and assessment methods that lead to the outcomes.

It is suggested that a curriculum map be developed to validate if there is a match between desired outcomes (competencies) and the content of programs. This will give the stakeholders a holistic perspective to see how the desired outcomes will be developed in the academic program. By making this map, the institution and the department concerned could redesign, add, or remove courses to develop the desired competencies.

As shown in Table 7, the curriculum map is prepared by making a grid with the outcomes occupying a row and the courses occupying a column (or the other way around). The idea is to check the outcomes to which each course contributes.

Table 7. Sample Curriculum Map

Courses/ Subjects	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6
	Apply management theories & methods to various types of organizations	Solve problems using methods of management science	Act within social and ethical dimensions	Develop the capacity for learning new knowledge and skills	Use inter-personal & communication skills effectively	Plan for self-development while managing one's self
Accounting 101	L	L	O	P	O	O
Business Statistics	L	L	O	P	O	O
Marketing 101	L	L	O	P	O	O
Finance 101	L	L	O	P	O	O
Philippine Business Law	L	L	O	P	O	P
Organizational Behavior	L	L	O	P	O	O
Financial Management	L	L	O	P	O	O
Operations/ Production	L	L	O	P	P	O
Strategic Management	L	L	P	P	P	O
Practicum	L	L	P	L	P	P

(Legend: L–learned in the course; P–practiced in the course; O–not yet learned/practiced but the opportunity to exists)

A legend is useful in correlating the outcomes and the courses.

For example: L – learned in the course; P – practiced in the course; O – opportunity to learn or practice in the course, not yet learned or practiced.

Another legend is as follows: I – Introduce, P – Practice skills with supervision, D – Demonstrate skills, without supervision. Health-related programs use this legend since the courses are designed to develop competencies at different levels (see Annex 3).

It is also possible to simply put a check where the courses lead to certain program outcomes.

Planning for Resources

The learning environment needs proper support structures, which means planning for the resources to put these things in place. If the HEI decides to put up a particular degree program, it should thus consider the resources that will go with it.

An important resource is the **faculty**. The nature of the learning environment determines the kind of faculty that the HEI hires, retains, and develops.

For example:

- a professional institution may wish to focus on hiring practitioners,
- a university on researchers,

- a college on policy-makers or combinations of qualifications.

Facilities and learning resources are also important.

For example:

- a degree in chemistry or physics requires science laboratories;
- a degree in chemical engineering requires laboratories and pilot plants;
- a degree in computer science requires computer laboratories;
- a degree in maritime requires simulation laboratories;
- a degree in health sciences needs patient care facilities, both in hospitals and communities.

But it is not the facilities per se that are required, rather, it is the *use* of these facilities to develop particular competencies that underlies the need to put them in place. Library and other learning resources also have to be made available.

Non-academic programs also contribute to the learning environment. These include programs for student support, faculty development, and extension programs, among others.

Communal areas, especially those for study and extra-curricular activities, also have to be considered in the planning since they contribute to the well-being of students.

These are part of the decision and commitment that the HEI makes when it decided to exist as a provider of higher education in general and offer degree programs in particular. Given the limited resources of most HEIs, it is important to make the strategic decisions as to what programs to offer.

Implementing the Teaching-Learning System

Curriculum Delivery: Student-Centered Courses

OBE assumes a certain approach to delivering and assessing learning. There is a shift from the teacher being at the center of the learning process to the student being at the center of the learning process. This approach is also known as the Outcomes Based Teaching and Learning (OBTL)⁷⁰.

In this paradigm shift, the teachers are not just experts giving inputs, they are facilitators of learning, allowing the students to play their part in constructing knowledge through experience, discussions, reflections, and other processes that promote analytical and critical thinking. Because the focus is now on the student's attainment of competencies, there is a need to observe and/or measure the knowledge, skills, and attitudes that have been achieved.

The paradigm shift also means that the learning process involves a system that begins with designing the curriculum so that course outcomes are aligned with program outcomes, and that learning activities and assessment are aligning with the learning outcomes of each course. This systematic alignment of teaching/learning activities and assessment tasks to the course outcomes is referred to as *constructive alignment*.⁷¹ It means that the planning of these activities and tasks as well as other teaching decisions are always in view of "achieving or assessing the intended learning outcomes."

⁷⁰ Biggs, J. and Tang, C. (2011). *Teaching for Quality Learning at University: What the Student Does*, 4th Edition (The Society for Research into Higher Education). US: Open University Press.

⁷¹ Ibid.

These learning outcomes are written in terms of desired outcomes, and uses active verbs that can be observed/measured in terms of behavior. These describe exemplary behavior and standards that can be used as bases for assessment of performance. The revised Bloom's Taxonomy⁷² provides a good starting point in choosing the verbs for learning outcomes and the different levels of thinking skills.

By its very nature, OBE is holistic in its outcomes focus. Attaining the learning outcomes is not an end in itself but it provides building blocks for achieving higher-level outcomes, such as applying learning, analyzing ideas, evaluating options, or creating new solution methods.

This new paradigm requires a new approach to assessment as well. Assessment tools have to reflect the attainment of desired competencies, which are stated in terms of something observable and/or measurable.

Developing an Outcomes-Based Syllabus and Learning Plan

At the level of courses, the syllabus helps in shifting the paradigm from teacher-centered to student-centered learning. Preparing the syllabus begins with the writing of learning outcomes instead of course objectives.

The simple act of changing the verbs from the intent of the teacher to the competencies of the student actually helps both the teacher and the student shift their perspectives. Learning outcomes thus use verbs that are **active** and describe behavior that is **observable/measurable** (see Annex 4 for sample verbs).

These learning outcomes will then help the teacher determine the content and methodology that will help achieve the learning outcomes. The syllabus usually contains the learning outcomes, the planned content and methodology that will lead towards the learning outcomes, the learning resources to be used, the requirements, the grading system, and relevant policies for the class (see Annex 5 for sample syllabus).

Writing the Learning Outcomes

Developing the syllabus begins with asking what competencies (knowledge, skills, and attitudes or KSA) students should have by the end of the course.

- What knowledge is the student able to articulate at the end of the course? – This refers to *information that they would have stored through the learning experience*.
- What skills is the student able to demonstrate at the end of the course? – This refers to *demonstrable abilities*.
- What attitudes is the student able to exhibit at the end of the course? – This refers to *evaluative cognitions regarding things/activities* (positive or negative judgment).
- Finally, which KSAs can be grouped together to form a competency? – These competencies constitute the learning outcomes or objectives of the course as well as translate to the performance indicators of the course (see Annex 5 for sample syllabus).

Box 3 shows an example of determining learning outcomes.

⁷² Anderson, L. W. and Krathwohl, D. R. et al. (Eds.) (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. Boston, MA: Allyn & Bacon.

For example, for a Basic English course, there are at least two ways of determining the learning outcomes:

One is to think directly of the combination of KSAs, e.g., speak fluently, accurately, & creatively in English.

Or we can begin by thinking of the KSAs you want them to learn from the class, e.g., the knowledge of grammar, syntax, and pronunciation; the skills of organization, fluency, and enunciation; and the attitude of openness to communicate.

These can be combined in the competency: speak fluently, accurately, and creatively in English.

Box 3. Example of Determining Learning Outcomes

Once these competencies are determined, the learning outcomes should be written using **active** verbs that are **observable/measurable** and demonstrate *exemplary* behavior and standards, or a particular action, as mentioned earlier.

In many cases, since the course objectives had been written in the more traditional way, the exercise is to change the verbs, and in the process, change the perspective from teacher-centered inputs to student-centered learning outcomes. Changing the verbs forces the teacher to see learning from the perspective of competencies the students learn and what they are able to know, do and be. (see Annex 4 for sample verbs.)

Table 8 shows the shift in perspective, with the use of an outcomes-based approach:

Table 8. Shift in Perspective using an Outcomes-based Approach

Teacher-Centered Inputs	Student-Centered Learning Outcomes
At the end of the course, students should have a deeper and more reflective understanding of the context within which they will practice guidance counselling.	At the end of the course, the student will be able to share their reflections on the context within which they will practice guidance counselling.
Appreciate the interrelations between attitude, behavior and the other factors in society.	Discuss the interrelations between attitude, behavior and the other factors in society.
Be aware of current issues and challenges in an educational setting.	Share insights on current issues and challenges in an educational setting.
Pinpoint the national and international trends that will have an impact on education in the 21 st century.	Pinpoint the national and international trends that will have an impact on education in the 21 st century.

Box 4 discusses some pointers or tips in writing outcomes.

- 1) Keep statements short and simple. State the outcome as a single sentence of 25 words or less.
 - 2) Keep goals and outcomes aligned with the aims of education as stated in the Philippine Constitution, the national goals of education, and the vision, mission and goals of the institution.
 - 3) SMART
 - **Specific:** Write the outcome so that it expresses exactly what the learner is going to show, perform or accomplish, hence a specific action that is observable. Start with an action verb.
 - **Measurable:** Identify the deliverables, focus on the evidence that learners will produce.
 - **Attainable or Achievable:** Ensure that the outcome can be achieved.
 - **Realistic:** Ensure that you have the appropriate resources to successfully attain the outcomes.
 - **Time-bound:** Set target completion date. State the preamble.

For program goals: "After five years, the graduate will be able to..."
 For program outcomes: "Upon graduation, the learner will be able to..."
 For learning outcomes: "At the end of the learning experience, the learner will be able to..."

If learning outcomes are achieved, then the program outcomes will be attained.
 - 4) Consider the three domains of learning (Bloom, 1956, 1973) in stating the preamble:
 - Cognitive (knowledge or mental skills)
 - Affective (emotional areas or attitude)
 - Psychomotor (manual or physical skills)

For Cognitive and Psychomotor: ".....the learner will be able to..."
 For Affective: ".....the learner will choose to/ demonstrate/ voluntarily/ freely/ etc...."
 - 5) State learning outcomes as short-term statements and SMART. State program goals and outcomes as long-term general statements, but are still measurable, attainable, realistic, and time-bound.
 - 6) State learning outcomes as results, not processes (activities or strategies). Outcomes are ends while activities are means.
 - 7) Choose only one observable verb/behavior in a statement of outcome. Choose the behavior that is of a higher dimension of complexity.
 - 8) Sequence outcomes logically, e.g., according to –
 - Complexity – from lowest to highest level of the Taxonomy
 - Domain – cognitive, affective, psychomotor
 - Topic or content – sequence of learning experience

Whatever the sequence, ensure that a range of abilities and skills is developed.
 - 9) State objectives from the learner's point of view, not the teacher's.
 - 10) Align content, methodologies, and assessment with the learning outcomes.
- Source: Compilation of Dr. Evelina Vicencio from various references.*

Box 4. Ten Points to Remember in Writing Outcomes

Choosing the Methodology

If the learning outcomes focus on the student, there should also be changes in the methodology used. While it would be difficult to totally do away with lectures for practical reasons, new approaches have to be implemented, particularly those that focus on the competencies that the student has to develop.

For example:

- An engineering class could have simulations, experiments, and problem solving.
- A philosophy class could have discussions of readings, or critique of schools of thought.

It is important to remember that with the student-centered focus, the competencies of the teacher will also have to change.

While traditional approaches start with what the teacher wants to impart, the student-centered approach begins with what competencies the student has to learn as defined in the learning outcomes. This means that the teacher has to see the students in action, to diagnose where the students need improvement, and to make the necessary interventions to address these points of weakness.

This shifts the role of the teacher to being more of a facilitator of learning. As such, the processes may also take more time, and may be initially demanding for the teacher. However, as this becomes part of what the teacher routinely does, the experience of listening, interaction and observation may actually be fulfilling.

In the previous example (see Box 3), the content includes the knowledge of English grammar, syntax, and pronunciation; the skills of organization, fluency, and enunciation; and the attitude of openness to communicate.

- One approach could be an exercise followed by a lecture followed by an application activity.
- Another approach would be starting with a text that need to be corrected, culling the principles of grammar from the corrections, and then having writing exercises.

The latter approach would need more time but may actually have a deeper impact on learning.

Box 5. Example of Selection of Methodology

Assessing Student Learning

Assessment involves one or more processes that identify, collect, analyze, and report data that can be used to evaluate achievement of learning outcomes. Effective assessment uses relevant direct, indirect, quantitative and qualitative measures appropriate to the learning outcome⁷³. This implies that there is no single best type of assessment. The basic consideration is that the assessment reflects the learning outcomes, that is, the assessment should be aligned with learning outcomes and not the other way around.

Very often, teachers and students alike give more importance to the content and the corresponding assessment than the learning outcomes because the result of assessment translates into the grades students will get. Learning outcomes stated in the syllabus become formalities that have to be formulated as an essential part of the syllabus and not used to determine methodology and assessment.

Alignment of learning outcomes, content, methodology and assessment cannot be overemphasized. Whether assessment is direct, indirect, quantitative, qualitative, formative, or summative, it is important to remember that it should be appropriate to the learning outcomes.

Assessment data inform the teachers of what, how, how much, and how well the students are learning what they are teaching, based on mutually agreed explicit criteria. It is,

⁷³ CMO No. 37, series 2012, *Policies Standards and Guidelines in the Establishment of an Outcomes-based Education (OBE) System in Higher Education Institutions Offering Engineering Programs*

therefore, an **interactive process** between the students and the teachers and mutually beneficial to both.

Being interactive focuses on assessment being student-centered since its primary aim is to improve learning. It also focuses on its being teacher-directed, because the teacher initially plans what and how to assess. As such, the criteria for assessment are mutually agreed upon by the student and the teacher. Meaning, as assessment improves the student's learning, it likewise improves the teacher's teaching.

The purposes of assessment have been categorized into three:

- 1) assessment *for* learning;
- 2) assessment *as* learning; and
- 3) assessment *of* learning.

The above order or sequence (*for, as, of*) is intentional, indicating the importance of assessment *for* learning and assessment *as* learning in enhancing student learning.

Assessment of learning is used in making summative decisions.⁷⁴ The purposes are distinct, but interrelated.

Assessment as learning focuses on the role of the student as the critical connector between assessment and learning. The students actively monitor and critically assess their own learning and use the feedback from this monitoring to make adjustments, adaptations, and even major changes in what they understand and how they are learning.

Assessment for learning provides feedback to both the teacher and the student of the latter's progress towards achieving the learning outcomes, which should be used by the teacher to revise and develop further instruction.

Both assessment as learning and assessment for learning occur throughout the learning process, making it **formative** in nature.

Assessment of learning occurs at the end of the course, when teachers use evidence of student learning to make judgments on the student's achievement against competencies and standards stated as learning outcomes, making it **summative** in nature. Whatever the purpose of assessment, they all use a variety of assessment methods.

Because the focus is on outcomes, examination questions should enable the student to demonstrate the deeper insights and higher order thinking skills (HOTS). Alternative modes of assessment, such as reflection papers, projects, portfolios, etc., can demonstrate a range of competencies that cover analytical, critical, and synthetic thinking.

For example:

- Assessment for an engineering class showing the students' theoretical knowledge, practical skills, and creativity, could be through design or manufacturing a product.
- Assessment for a philosophy class demonstrating the students' analytical and critical thinking could be through a discourse and reflection paper.

It is also important to remember that in developing alternative modes of evaluation and assessment, rubrics must be clear so that the process maintains a certain objectivity and transparency. These rubrics will have to be developed by each teacher (or by the department) and communicated to the students. This also means that the students should take a more proactive role in their own learning.

⁷⁴ Western and Northern Canadian Protocol (WCNP). (2006). *Rethinking Classroom Assessment with Purpose in Mind. Assessment for Learning Assessment as Learning Assessment of Learning*. Manitoba, Canada: Crown in Right of Manitoba.

Preparing the Learning Plan

Based on the learning outcomes, the learning plan could be constructed, that is, lay out the plans for content, methodology, resources, and assessment. The learning plan is thus a syllabus with time element and specific activities. This entails planning the different lessons so that certain KSAs are learned in the process, that is, budgeting class time so that the content is learned using an appropriate methodology and student learning is properly assessed.

Note that some methodologies take more time than others to implement. The learning plan can have different styles (refer to Table 9 and Annex 6), but it is essentially a tool to oversee the match between the learning outcomes and the content and methodology.

In an excerpt from a sample learning plan, as shown in Table 9, the learning outcomes are presented against the topics, activities, resources, and assessment tools needed to attain the stated learning outcomes.

Table 9. Sample Elements of a Learning Plan

Learning Outcomes	Topics	Activities	Resources	Assessment
Discuss the inter-relations between attitude, behavior, and the other factors in society.	<ul style="list-style-type: none"> • Introduction to attitude and behavior • Interrelations between attitude, behavior, and other factors in society 	<ul style="list-style-type: none"> • Case study • Discussion • Role playing 	<ul style="list-style-type: none"> • Case files • Guide questions • Role playing exercises 	<ul style="list-style-type: none"> • Case analysis: <ul style="list-style-type: none"> ▪ identifying inter-relations ▪ concept mapping
Share insights on current issues and challenges in an educational setting.	<ul style="list-style-type: none"> • The nature of an educational setting • Current issues and challenges 	<ul style="list-style-type: none"> • Lecture • Small Group Discussion • Group Reports 	<ul style="list-style-type: none"> • Readings • Guide questions • LCD projector • Laptop 	<ul style="list-style-type: none"> • Group Report

Assessment of the Program Outcomes

After going through OBE at the course level, the unit in charge of programs still need to make sure that the sum or combination of learning outcomes in the various courses is truly aligned with the program outcomes.

Furthermore, the HEI is encouraged to develop its own systems for monitoring and assessing the alignment of these program outcomes with its VMG.

In developing this QA system for program assessment and evaluation, several elements should be included:

First, it should consider the *performance indicators* that were set at the start while planning for the program, i.e., the competencies under each outcome, which each student should demonstrate at the end of the program.

Second, it should consider the *assessment methods* which should be appropriately selected to measure the performance. These methods should also be able to look into the *quality of the processes* involved in running the program since this indicates the level of system design and preparation as well as the level of engagement of the faculty and program directors.

Third, it should consider the *standards* since these indicate the *quality of the product*, i.e., *level of student performance*. This element also indicates the presence, extent, and effectiveness of the implementation of the learning plan. This also means that the learning plan took into consideration the starting point of the students.

Fourth, the *efficiency* with which the program operates should be considered. This indicates how much (in terms of human/ physical/ financial resources) was required in order to deliver a certain level of performance.

The HEI may also want to incorporate at this stage the monitoring and evaluation elements of various accrediting and certification agencies.

The unit concerned (e.g., the department) can develop a scoring system at the program level so that it can better assess how effective it had been in implementing the program.

The results of this scoring system are valuable input to helping the unit and top administration to identify areas for improvement and eventually feed into the CQI (Continuous Quality Improvement) for the program.

Completing the Quality Cycle: Continuous Quality Improvement

The gap between the actual measure and targets of the program outcomes serves as the basis for program evaluation and interventions for continuous quality improvement of the program. However, the Plan-Do-Check-Act quality cycle, which serves as the basis of the framework of CHED's quality reforms, does not really end in a perfect state for the HEI. Instead, it is a cycle that helps the HEI adapt to its changing environment.

More so in the current context, the environment of HEIs is in flux. Thus, the HEI is faced with the challenge to constantly adapt, even its quality improvements. It is, therefore, a mindset that the HEI has to acquire, that is, continuing its quality reforms, and this can be achieved by implementing Quality Assurance systems. The HEI can develop a program for CQI that will help it move through different levels of performance.

Program outcomes themselves should be improved continuously, thus, there should be a system that helps the HEI to see the levels that should be attained in each cycle (or spiral, to indicate increasing levels), e.g., in the areas of employability and competitiveness. It could begin with internal indicators, then move on to benchmarking with industry, and then look at the level of macro indicators. The system should involve collaborative processes that enable stakeholder feedback, e.g., benchmarking vs. external indicators through alumni and industry.

The HEI's development of program monitoring and assessment tools is one step in this direction. But the overall picture still needs to be considered since the HEI's programs is just one aspect of the QA systems that have to be put in place.

Box 6 shows a system developed by the Technical Panel (TP) for Engineering in 2012 to illustrate how the concepts of OBE can be practiced.

- 1) It begins by asking the respondent (e.g., the department or HEI) to illustrate and explain its *OBE Framework*. *Basic Program Information* should also be provided, including information on the HEI, average annual student enrolment data, institutional vision-mission statement, college vision-mission statement, and program educational objectives or PEOs.

PEOs are broad statements describing the career and professional accomplishments that the program is preparing graduates to achieve within a few years of graduation, based on the needs of the program's constituencies.

- 2) The *program outcomes* then have to be stated. These should specify what are expected for graduates to know and be able to do. These relate to the KSAs that the students acquire as they go through the program.
- 3) A *curriculum map* has to be provided, indicating whether a course is:
 - Introductory course to an outcome,
 - Enabling course or a course that strengthens the outcome, or
 - Demonstrative course or a course that demonstrates an outcome.

A *summary of course prerequisites* (or a course prerequisite map) follows.

- 4) There is also an *Outcomes-Based Teaching and Learning Delivery Checklist*, including:
 - Program of Study by Term
 - OBTL Framework and Short Description
 - OBTL-based Syllabus Template
 - Course Assessment/ Evaluation System
 - Faculty Qualifications Sheet
 - Faculty Loading Sheet Per Term
 - Faculty Classification/ Evaluation System
 - Classroom Facilities Sheet
 - Laboratory Facilities Sheet
 - Computing Facilities Sheet
 - Learning Resources Sheet
 - Faculty Development Support Sheet
 - Student Development Support Sheet
- 5) The *Program Outcomes - Performance Indicators - Assessment Evaluation Methods - Standards Matrix* summarizes the important elements described in the section on the Assessing the Program Outcomes (see Annex 7).
- 6) Finally, there is the CQI Information Sheet, which lists the documents pertaining to:
 - Institutional Mission-Vision CQI Process Description,
 - Program Educational Objectives CQI Process Description,
 - Program Outcomes CQI Process Description,
 - CQI Project/Program Proposal Template,
 - Sample Approved CQI Projects/Programs, and
 - Sample CQI Project/Program Reports.

Each step is evaluated, and thus provides valuable feedback to the HEI implementing the program.

Box 6. A System Illustrating how OBE Concepts can be Practiced as Developed by TP for Engineering

PART IV – INSTITUTIONAL SUSTAINABILITY

ASSESSMENT: TOWARDS OUTCOMES-BASED QUALITY ASSURANCE

CHED promotes Institutional Sustainability Assessment (ISA) because it can serve as a learning process for the HEI and contribute to its continuing quality cycle.⁷⁵ The ISA is developmental in nature and entails a more reflective review of the institution's VMG and desired outcomes.⁷⁶

The ISA Framework has five key result areas within which judgments are made about the performance of institutions.⁷⁷

- 1) *Governance and Management (including Management of Resources)*
- 2) *Quality of Teaching and Learning (competency, programs, faculty)*
- 3) *Quality of Professional Exposure, Research, and Creative Work (including linkages)*
- 4) *Support for Students (learning resources and support structures)*
- 5) *Relations with the Community (extra-curricular linkages, service learning, outreach)*

Within each key results area, there is a number of indicators. Some of these are core indicators that apply to all institutions. The other indicators apply to institutions to the extent that is appropriate in relation to the mission and stage of development of the institution. There are fourteen indicators, eight of which are core indicators.⁷⁸ (Refer to Annex 2 for the specific indicators.)

Determining Institutional Outcomes

Outcomes based on HEI VMG

The first step to this exercise is to establish the HEI's VMG. The VMG are the foundations of an organization, a company, or an institution.

The **Mission** states what the institution is all about: its purpose and identity, its core values, its reason for being. This may be stated in the documents that created it, but this may also have been redefined in the course of its history.

The **Vision** is a picture of the long-term future, taking into consideration the institution's mission and what it aspires to be.

The institution then moves toward this future by achieving particular **goals** within a timeframe, using appropriate strategies.

Many organizations revisit their VMGs in a process referred to as **Strategic Planning**. Key leaders of the organization, with inputs from other stakeholders, determine how the organization can best achieve their VMG in the context of the current environment. Strategic

⁷⁵ Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA, Section 7.2, p. 28.

⁷⁶ *Primer on the Quality Assurance and Institutional Sustainability Assessment of HEIs*, Annex 4 of Guidelines for the Implementation of CMO 46, series 2012 on the Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through Outcomes-based and Typology-based QA, p. 17.

⁷⁷ Ibid.

⁷⁸ Ibid.

Planning exercises usually begin with an environmental scan, in order to situate the institution within its immediate (local) as well as its macro-environment (regional, national).

While the Vision-Mission may not change often, the goals and strategies may have to be modified to respond to current opportunities and threats. The HEI then has to make key decisions in terms of how it will pursue its VMG in the new context.

Among the challenges of Philippine HEIs today are the limited human, physical, and financial resources available to them; the increasing competitiveness and accessibility of other universities in the Asian region; and complex problems requiring new skills from graduates of the HEIs. Thus, the

HEI needs to understand not only its internal but also its external environment. The HEI can then identify its strengths and weaknesses based on the internal environment as well as the opportunities and threats coming from the external environment.

The HEI's institutional goals or outcomes can be stated in terms of the ideal attributes of its graduates and its impact to society. The strategies describe how to achieve these outcomes with the proper programs and learning environment. The HEI also needs to decide how to allocate resources (e.g., human, financial, physical, learning resources) and what performance indicators to use in order to know if it has achieved its goals.

There should be a periodic review, which should yield enhancement of programs and systems that give quality outcomes. The cycle (or spiral) continues as the HEI develops into a mature institution.

For example:

- An HEI can do an environmental scan to show trends in the political, economic, socio-cultural, technological, legal, and environmental landscape as well as trends in higher education. It is good to see these trends at the local, regional, and/or national levels.
- The HEI also needs to reflect on its internal environment, i.e., articulate the state of its organization in terms of its human, physical, and financial resources; the efficiency of its operations; its effectiveness in attaining its targets, etc. This can be done with the help of assessment and evaluation tools.
- The internal and external environmental scan could be the basis of a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis, i.e., determine the HEI's strengths and weaknesses based on the state of its internal environment, as well as opportunities provided and threats posed by the external environment (refer to Figure 4).

Based on the SWOT analysis, the HEI can define outcomes in terms of graduate attributes and its contribution to local/regional/national development.

- What kind of graduate could be most productive in the context of the new environment?
- What kind of competencies would this graduate need?
- What is the role of the HEI in local/regional/national development?

The HEI may even wish to revisit its VMG and strategies in the context of the new environment.

- What programs and learning environment will help move the HEI forward?
- How should resources be allocated?
- What are the performance indicators?
- When will the review take place?
- What improvements can be made to enhance the programs and systems?

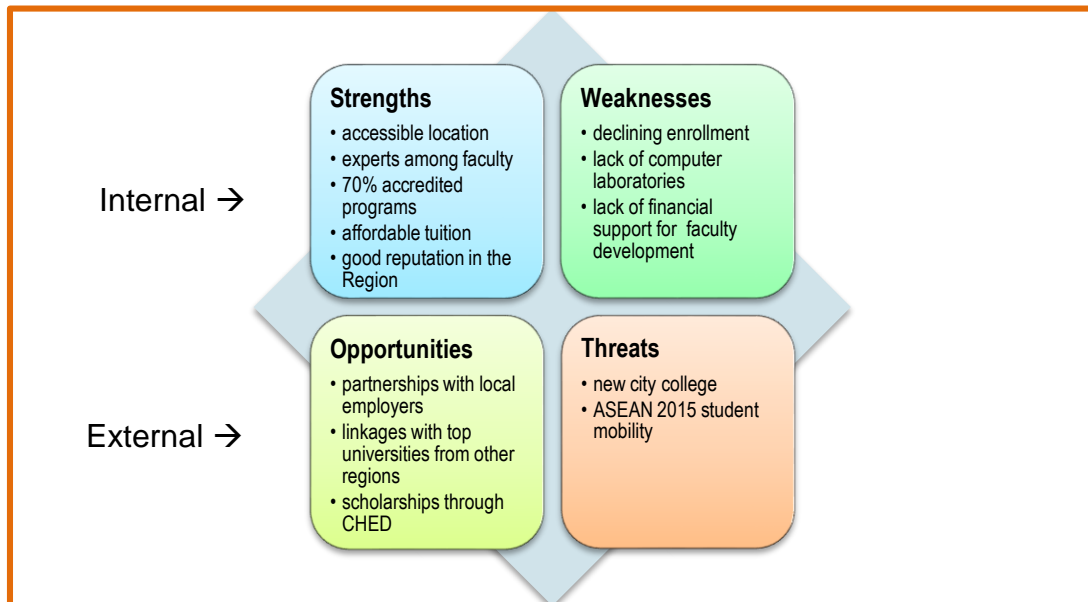


Figure 4. Sample of a SWOT Analysis for an HEI

Describing the Ideal Graduate Attributes and Impact on Society

The current context of higher education is much more complex because it is not limited to the local, regional, or national conditions. Global mobility, international rankings, and institutional sustainability are just a few factors that must also be considered.

Philippine HEIs are particularly challenged to produce Filipino graduates who can engage meaningfully in their communities and in building the nation and who are productive and competitive, especially in the context of ASEAN 2015 and the globalization of professional practice.

CHED recognizes that different types of HEIs will respond fittingly to particular global and national challenges and CHED classifies HEIs into horizontal typologies – *Professional Institution, College, and University*.

In its journey towards quality, each HEI must then ask itself four things to serve as its roadmap – given its type, VMG, and the external environment:

Question 1: What are the attributes of our ideal graduate?

The attributes of its ideal graduate can include competencies (skills, knowledge, and attitudes), qualities (traits, work ethics), and values. These attributes become the bases for the kind of teaching-learning environment and support systems that need to be designed for the HEI, including the resources that needed to implement these.

Question 2: As an institution, what impact do we want to have on society?

The HEI's impact on local/regional/national development may include policy, economic, social, technological, and environmental aspects of development.

Question 3: How can we achieve these goals?

With the outcomes in mind, it will be easier to write the goals (ends) of the HEI and the strategy (means) that the HEI will employ to achieve the goals. These translate into the programs, learning environment, support and management systems that will be implemented. The goals will also determine the performance indicators against which the HEI will assess the success of its initiatives.

Question 4: Are our operations sustainable?

Institutional sustainability is an important question because this reflects not only the HEI's capability to survive and achieve its VMG, but also its culture of quality.

The HEI's desired outcomes regarding the attributes of its ideal graduate and its impact on local/regional/national development, together with the CHED PSGs, will then be the bases for the HEI's program outcomes. (Refer to Box 7 for an example on how to institutionalize QA systems.)

Step 1: A College can describe its **ideal graduate** as one who has:

- competencies for meaningful employment in social work and healthcare;
- qualities such as being articulate, disciplined, and professional; and
- values such as honesty and service-orientation.

Step 2: It can also describe its desired **impact on society** as the catalyst for community-based solutions for rural development.

Step 3: The next question is what kind of programs will develop these graduate attributes and create the impact on society? How will the academic degree programs be implemented? Do we create a learning environment that promotes experiential learning or discourse? What kind of non-academic programs can be offered to promote service-orientation? What kind of extension programs will promote the interaction of people in communities?

Once these have been decided, the **goals** can be written, for example:

- 1) to improve public recognition of competencies of the HEI's graduates; and
- 2) to implement community-based solutions for rural development.

Step 4: **Strategies** also need to be identified, such as:

- linking with the healthcare industry and community development organizations for on-the-job training and
- establishing extension programs for farmers or fisher folks in the locality.

Step 5: These then have to be translated into **specifics of the programs** such as:

- the content and methodologies of teaching and learning (such as implementing active/experiential learning)
- the kind of support systems that have to be put in place
- the processes and procedures that will ensure a smooth flow of activities.

The HEI also needs to ask:

- Who are the leaders who can champion these programs?
- What resources are needed and where will they be sourced?
- What are the performance indicators against which it will assess the success of its initiatives?

Step 6: At the program level, the departments will write their own **program outcomes**, considering the following:

- 1) the minimum program outcomes defined in the appropriate PSGs, i.e., outcomes common to all programs in all types of schools, common to a discipline, specific to a sub-discipline and a major, common to a horizontal type as defined in CMO 46 s 2012;
- 2) the attributes of its ideal graduate; and
- 3) its impact on local/regional/national development.

These program outcomes will spell out the competencies of the ideal graduate of a program as well as the potential impact of its related activities (extension, research, innovation) to society.

Step 7: These outcomes can then be mapped against the existing courses within the program to see if there is a match between the curriculum and the outcomes. The results of the **curriculum mapping** can provide inputs into the improvement of content, methodology, course delivery, learning resources, and support services.

Step 8: The HEI can also institutionalize its **faculty development** so that the faculty members have a shared view of their institutional outcomes, a culture of quality, and the practice of outcomes-based education in the HEI.

Box 7. Example of Institutionalizing QA Systems

Indicators, Metrics, Targets

Performance indicators or key performance indicators (KPI) are used to assess whether the goals of the institution have been achieved. They define what is being measured, how it is measured, and the unit of measurement (metric) if it is a quantitative indicator.

Although ideally KPIs should be specific and measurable, some qualitative indicators may also be useful. The HEI can then work towards a target value, which is then equivalent to successful performance.

Performance indicators should also be identified for the program outcomes, and these refer to the competencies that have actually been developed in the students, as discussed in Part III. Box 8 shows an example of setting the indicators, metrics, and targets.

For example:

Some KPIs for the HEI goal of improving the recognition of competencies of the HEI's graduates would be the:

- 1) performance of first-time takers in the licensure examinations; and
- 2) employability of graduates.

For the first KPI, the metric would be the passing rate reported by PRC and the target of the HEI could be 70% passing rate.

For the second KPI, the metric could be the percentage of graduates employed within one year determined through tracer studies and the target of the HEI could be 80% employment rate.

Box 8. Example of Setting Indicators, Metrics, and Targets

For the aspect of institutional sustainability, the CHED ISA tool can be used as a guide for determining the HEI's indicators, metrics, and targets.

It is to be noted that while the thrust is outcomes-based QA, ISA has some inputs-based metrics that are still important foundations of the HEI. However, these will have to be aligned with the institutional and program outcomes. (See Annex 2 for the ISA Framework.)

Designing Institutional Systems

After determining the goals and strategies, the next question is what kind of learning environment and what types of academic and non-academic can aid in the implementation of the strategic plan. The HEI must thus make decisions in this regard, particularly the thrust of its programs, the content and methodologies of teaching and learning, the kind of support systems these require, etc.

These decisions mean that the HEI is committing resources and other forms of support to the programs, teaching-learning systems, and other initiatives that will help the HEI achieve its goals.

Planning for Resources

While HEIs can dream, they must also be **realistic** in terms of their capabilities and resources. The HEI should explore different ways of achieving its goals, including the prioritization of its resources.

It helps to have key stakeholders involved in the planning for resources because they could contribute different things, depending on their background, e.g., learning paradigms, financial analysis and projections, Information and Communications Technology (ICT) solutions, and human resource management.

When planning for these resources, it is important to keep going back to the VMG, to be true to the mission and identity of the HEI, instead of making decisions based on short-term cosmetic effects.

In the long-term, this consistency to the VMG can give the HEI more focus on what it will do in terms of academic and non-academic programs, and make the institution more sustainable as it builds a more solid and consistent reputation.

It also helps to have a transparent process for planning and decision-making, especially when certain areas are given priority (and thus larger allocations) than others. One way of doing this is to set up the guidelines and criteria ahead of time, and not change the rules of the game midstream.

Planning with the KRAs

Institutional QA systems are key to the organization's sustainability. As mentioned earlier, CHED recommends that these QA systems cover five KRAs under the ISA Framework, namely *Governance and Management*, *Quality of Teaching and Learning*, *Systems based on HEI Type (Professional Exposure, Research, and Creative Work)*, *Support for Students*, and *Relationship with the Community*. These KRAs and the corresponding criteria are summarized in Table A2-1 in Annex 2.

QA systems in HEIs refer to mechanisms, procedures and processes that help to achieve the desired quality in the five KRAs.

If the HEI is clear about its desired institutional outcomes, then it is also expected to articulate the means that will lead to those outcomes, particularly for each of the five KRAs. These KRAs can guide the HEI in determining what systems to put in place. Some *examples* of general questions that can lead them to appropriate mechanisms, procedures and processes are:

- What governance and management systems are needed to ensure sustainable and transparent operations, so that the programs may be carried out over the long-term?
- What kind of learning environment is needed to achieve the desired quality of teaching and learning? What mode of delivery is appropriate and what support systems are needed? In this regard, what kind of faculty will best implement the strategies?
- What kind of type-specific programs will enhance the HEI's contribution to national development?

- What kind of support for students is needed for them to develop the desired attributes of the HEI's ideal graduate?
- How can the HEI best relate to the community so that their programs are relevant and benefit not only the students and faculty but also the development of the community?

To help HEIs design more specific systems, it would be helpful to use the ISA Self-Evaluation Document (SED) Guide. Under each criterion of the KRAs, there are suggested elements that may be used as a guide in determining what systems should be put in place to help the HEI in its quality cycles. The ISA SED Guide can be downloaded from the CHED website.

Governance and Management

Governance refers to the systems that reflect the principles guiding the overall use of authority and decision-making of the institution's governing body. The institution's governance arrangements should demonstrate:

- probity
- strategic vision
- accountability
- awareness and management of risk, and
- effective monitoring of performance.

Governance should start with a clear articulation of the VMG which reflect the context of the HEI.

There should also be a transparent governance system (such as structure and processes) especially in determining policies of the HEI. There should be systems for communicating these to the stakeholders.

Management refers to the overall systems and processes of operations of the institution. The institution's management, financial control, and quality assurance arrangements are sufficient to manage existing operations and to respond to development and change.

Governance and management are usually most effective if there are **enabling features**. These refer to particular initiatives of the institution that contribute to efficiency, productivity, and quality of the community environment.

Examples are:

- 1) use of information, communications and technology (ICT) for more efficient and effective management; and
- 2) viable, sustainable, and appropriate resource generation strategies to support its development plans.

Box 9 lists some pointers to consider relative to planning the HEI's governance and management.

- In terms of **governance**, the HEI's Board has clear processes in developing and approving policy, and communicating resolutions to the stakeholders. The criteria for choosing the Board members are clear and the processes of nomination and election are transparent.
- In terms of **management**, the different aspects of the HEI's operations are clearly documented in various manuals that guide the management of human, financial, and physical resources. There are criteria and processes for choosing key administrators, with a bias for merit and track record.
- In terms of **enabling features**, the HEI has a strong Management Information System that allows it to keep track of resources, outputs, and wastage.

Box 9. Points to Consider in KRA Governance and Management

Quality of Teaching and Learning

The quality of teaching and learning can be sustained if there are clear program standards. These, in turn, are achieved through transparent processes of approval and implementation, as well as monitoring and review.

The results of these processes should enable the HEI to undertake actions to strengthen their programs. Thus, these three criteria should be considered in the teaching-learning systems:

1. Program Approval and Implementation

This refers to processes for approving and implementing programs. Processes for program approval should take into consideration the HEI's VMG and resources, the development needs of the region/country, and appropriate design to achieve the desired competencies of its graduates.

Processes for program implementation should ensure that every effort is made to achieve the intended outcomes through proper resources and oversight.

2. Program Monitoring and Review

This refers to processes for monitoring and reviewing the effectiveness of its programs. These processes should look at outcomes, especially in terms of student achievements, performance of graduates, and efficient use of resources.

3. Action to Strengthen Programs

This refers to processes, which ensure that the HEI takes effective action to address weaknesses, build on strengths, and to enhance performance by the dissemination of good practice.

Aside from the programs themselves, faculty members are keys to the implementation of teaching-learning programs. Thus, there should be a system, which ensures that there is an adequate number of faculty members with the appropriate expertise and competence to teach and facilitate learning in the courses offered by the institution. **The HEI needs to have systems and processes of hiring, retaining, and developing such faculty.**

In the context of contemporary modes of learning, the HEI needs to make effective use of learning resources, such as library resources, laboratories, and ICT to support student learning. Thus, **there should be systems and processes in place that will ensure the relevance and appropriateness of such resources, as well as access and utilization by faculty and students.**

Box 10 list some pointers to consider in developing quality of teaching and learning.

Setting and Achieving Program Standards

Program Approval and Implementation

There are clear procedures for proposing, approving, and implementing new programs. Usually, the guidance of an office or an administrator could facilitate the dissemination of information regarding procedures. There are also requirements, such as the rationale of the proposed program, a feasibility study to ensure the sustainability of the program, persons/department in charge of implementation, etc. There is some form of documentation, such as manuals, memos, or minutes of meetings.

Such systems will protect the HEI from arbitrary program approval, and result to the sustainability of programs and efficient use of resources.

Program Monitoring and Review

There are also clear procedures for monitoring and review of approved programs. These include the persons/bodies in charge, performance indicators and targets, and tools for observing/measuring performance.

Such processes will give feedback to the implementing groups and help them assess the actual state of the programs.

Action to Strengthen Programs

Feedback mechanisms allow the HEI to gain an alternate perspective on how things are being managed on the ground. These should be the bases of any action to improve/strengthen the program.

In some cases, the HEI may even look at the option of freezing or closing programs to preserve the overall effectiveness of the HEI.

Undertaking the right action will help the HEI to become more efficient and focused in the use of its resources and in channeling the energy of its administrators.

Box 10. Points to Consider in KRA Quality of Teaching and Learning

Faculty Profile

Systems for hiring, retaining, and developing faculty help the HEI choose persons with the appropriate expertise and competence to facilitate learning, the right attitude that support the development of the attributes of the ideal graduate, and the values that are consistent with the HEI's VMG.

Since faculty members are key in the implementation of academic (and even non-academic) programs, systems that help the HEI achieve its desired faculty profile can actually help the HEI achieve its desired institutional outcomes, thereby improving its reputation and competitive advantage.

Use of ICT and Learning Resources

ICT and other learning resources support learning, especially in today's context. It is, therefore, important that the faculty and students have access to and use these resources.

Given the limited resources of HEIs, a mechanism/system can optimize the availability of resources to users. It also ensures that students get the proper support for learning, especially in fields which require use of equipment, facility with software, and skill in operations.

Such systems can develop students who can better adapt to their work environment, or who can better innovate because of their training and exposure.

Box 10. (con't)

Systems based on HEI Type (Professional Exposure, Research, Creative Work)

HEIs should design programs to strengthen their horizontal types.

Professional Institutions are expected to have programs that allow students to practice their learned competencies in view of their future careers, such as programs for practicum, internship, and on-the-job training (OJT).

There should be mechanisms and processes that enable the students to avail of these programs, guided by faculty members.

Colleges are expected to promote creative work and/or innovation in the arts and humanities, science and technology, social sciences, and/or management science.

There should be mechanisms and processes that enable faculty and students to engage in creative work and innovation, whatever their field of study might be. In particular, such creative work and innovation should be relevant to the communities these colleges serve.

Universities are expected to develop a research community of faculty, post-graduate students and post-doctoral research workers, which fosters and supports creative research and other advanced scholarly activity.

There should be mechanisms and processes that enable faculty and students to participate actively in these scholarly activities.

Box 11 lists some points to consider relative to professional exposure, research, and creative work.

- Different HEI types are still expected to have the three basic activities of instruction, research, and extension. However, different HEI types will have their own focus.
- **Professional** exposure is one way to introduce the students into their future professional practice. Thus, programs are expected to truly enhance the students' entry into the profession, instead of being used as labor for unrelated activities.
- **Colleges** may focus on certain disciplines and it is their creative work and/or innovation, which may be an indication of how they respond to the needs of the communities they serve. For example, are there awards for creative work and/or innovation because these are recognized as contributions to a local, sectoral, or sectarian community?
- The research in **universities** is demonstrated by publications and research activities. However, it is not enough to just count the outputs, which may be generated by a very limited number of participants. One way to observe the systems and mechanisms for research is the presence of a research community, which involves faculty and students from different levels. By this, we mean not only research activity, but a sharing of resources, results, and learning.

Box 11. Points to Consider in KRA Professional Exposure, Research, and Creative Work

Support for Students

If the HEI is true to its desire of developing particular attributes among its students, there should be appropriate and sufficient support. There should be processes for recruitment and admission of and academic support for students, taking special groups into consideration.

Furthermore, there should be effective arrangements to direct scholarships and study grants on merit to support the most able students in programs that develop competencies needed to support the Filipino economy and to enable the country to compete in global labor markets.

These processes can bring about a healthy combination of student diversity that can improve student quality.

There should also be structures and processes for delivering non-academic services for students that would enable them to complete their education and improve their performance.

Box 12 lists some points to consider in designing the support for students.

- HEIs generally achieve quality through student performance. Thus, systems for recruitment, admission, and academic support are keys in developing graduates with particular competencies.
- In the world ranking of universities, selectivity is a factor that has been correlated with good performance. However, many Philippine HEIs practice open admission, i.e., accepting anyone who applies. This practice can be very challenging in developing quality in the HEI.
- The point is to have systems that will allow the HEI:
 - to match the aptitude of the student with the academic program (e.g., diagnostic tests),
 - to bring the students to the academic level required for that program (e.g., bridging programs), and
 - to help the students adjust to the demands of the program (e.g., academic counseling).

Box 12. Points to Consider in KRA Support for Students

Relations with the Community

HEIs can have different kinds of relationships with the community.

- One relationship involves promoting developmental needs at local, regional, and national levels.
- Another involves relationships with partner institutions.
- A third kind of relationship involves more direct responses to the needs of its local community.

There should be mechanisms and processes for implementing programs that promote the social, cultural, economic, and/or developmental needs of the country at the local, regional, and/or national levels, as reflected in the HEI's VMG and in consideration of the country's need to compete effectively in global markets.

The HEI can also demonstrate its reputation through its networking and linkages. Thus, it is important to have structures and processes that promote and support partnership with other institutions.

Likewise, there should be structures and processes that promote extension programs which are relevant and responsive to the needs of the community, especially for people empowerment and self-reliance.

Box 13 discusses some points to consider in establishing relations with the community.

- Philippine HEIs generally are very good in maintaining non-academic programs that reflect their relations with the community.
- The **challenge** is to show that there are systems/mechanisms that help the institution select which relations and types of programs actually resonate with their VMG.
- It is also important to balance what the HEI does to create impact on society with what the HEI does to produce quality graduates. This means balancing the non-academic with the academic programs. In some institutions, this may mean a good system for aligning and integrating certain activities to enhance both the academic program and the relations with the community.

Box 13. Points to Consider in KRA Relations with the Community

Implementing the QA Systems

The HEI's roadmap will not mean much if it remains a document. The HEI needs to be on the road implementing its plans. This means translating its plans to reality and making the necessary adjustments along the way.

Efficiency and Effectiveness

Good managers try to ensure that initiatives and activities in the organization are done efficiently and effectively.

Efficiency refers to getting the most output or results from the input of resources or having the least wastage of resources.

Effectiveness generally refers to achieving the organization's goals, or at least contributing toward achieving these goals.

These are challenges that HEI administrators face. Given limited resources, efficiency means channeling these into activities and initiatives so that the maximum results are achieved. For instance, this can mean choosing academic degree programs that will require less on-campus facilities, but capitalize on the strength of linkages with the industry within the region. Connected to this is ensuring that the planned programs are implemented accordingly, with the help of efficient processes and procedures that will give quality outcomes.

Some HEIs may have the systems in place, but these may not be documented. The practice of documenting these systems helps the organization pass on what were once "unwritten rules" or even the culture of the organization.

It helps if these processes and procedures are documented, usually in a manual that can be used as a reference by the different stakeholders. Although documentation seems tedious initially, getting people to do this contributes to the development of a culture of quality because documents allow others to review the processes and decisions.

Aside from the transparency that this brings, it also clarifies the accountability of the different persons, sectors, and offices.

QA Systems for the KRAs

The SED is designed to guide HEIs in developing QA systems. It is structured such that KRAs are broken down into *indicators*, which in turn are broken down into *criteria*. Under each criterion are *elements*, or statements that suggest the expectations and outcomes for the systems in that KRA. The HEI may add statements that reflect additional elements for that criterion.

Governance and Management

The implementation of **good governance systems** leads to **systematic policy formulation and decision-making** as well as **sustainability of operations**.

Good governance systems also mean that an **effective communication system** is in place, so that stakeholders are familiar with the HEI's vision and mission and are informed of policies and decisions.

Good management systems, on the other hand, lead to **efficient and effective operations**. This means that there is speedy and appropriate response to external and internal developments which in turn can strengthen the support of stakeholders.

Quality of Teaching and Learning

Good teaching and learning systems will be reflected in student achievement and the performance of its graduates, and will have an impact on the **reputation and competitive advantage** of the HEI.

The implementation of processes to set and achieve program standards increases the **credibility** of the HEI, the level of student achievements, and the performance of graduates of the program in licensure examinations, their employability, or contribution to society.

Good systems for hiring, retention, and faculty development lead to **faculty competence** that will help ensure **better student performance**.

Systems for access and use of learning resources also lead to better student performance as well as **faculty engagement** that can fuel innovative programs.

Systems based on HEI Type (Professional Exposure, Research, Creative Work)

The implementation of mechanisms and processes that lead to **student and faculty engagement** in professional exposure, research, and creative work, should help the **HEI achieve its VMG**, particularly in responding to the needs of the country, the professions, the disciplines, or the community it serves.

Support for Students

Systems for the recruitment and admission of and academic support for students, and student scholarships ensure **student diversity** that could improve the **teaching-learning quality** and **student performance** which in turn could be instrumental in preparing citizens who can contribute to social development and compete in global labor markets.

Structures and systems for student services (such as guidance, counseling, and placement services) contribute to the **well-being of students** which may in turn contribute to their performance.

Relationship with the Community

Structures and processes that promote local/regional/national development and global competitiveness allow the HEI to contribute to the **social and economic development of the country**.

Systems that promote and support partnership with other institutions improve its **reputation** and even allow it to create more impact because of shared resources.

Implementation of systems for extension programs provides a more **direct engagement** with local communities, especially for **people empowerment and self-reliance**.

Assessment of the Institutional Outcomes⁷⁹

The HEI's journey to quality starts with a **roadmap**, which will be followed as the institution hits the road with its implementation activities.

It is important to remember, however, that it is wise to make the occasional **pit stop** to check if the HEI is on the right track. This translates to monitoring and measuring the results of its activities according to performance indicators.

Monitoring and evaluation help the HEI determine how effective it has been in achieving its goals.

In monitoring these QA systems, the following are considered:

- 1) **Presence of the system**

Mechanisms, procedures and processes exist, i.e., they are defined, known by users, and ideally, documented through a manual or a memo.

- 2) **Extent of implementation**

All users follow the mechanisms, procedures, and processes. Exceptions to the system are documented and justified.

- 3) **Outcomes**

The system leads to stakeholder satisfaction, HEI policy and reputation, etc.

⁷⁹ Refer to Self-Evaluation Document

4) **Effectiveness of implementation**

The implementation of the system helps the HEI achieve its goals and targets, as shown by the quantity and quality of outcomes.

The Institutional Sustainability Assessment Tool

The ISA tool has been developed to help HEIs in the monitoring and evaluation process. This tool takes the form of the Self-Evaluation Document (SED).

The SED guide not only gives the HEI the elements that external assessors will look for. It also gives the HEI a chance to reflect on its processes and outcomes. Hence, while it is essentially an assessment tool, it also serves as a guide in the design of institutional QA systems and the approaches to implementation.

Whether the HEI decides to be assessed by an external team or to simply use the tool to guide it in developing its QA systems, the ISA tool can be used in helping the HEI understand its systems better, reflect on areas for improvement, and search for solutions given their specific context.

Although ISA takes an outcomes-based approach to QA, there are still some inputs-based metrics included because these are important foundations of the HEI. However, these will have to be aligned with the institutional and program outcomes.

Completing the Quality Cycle: Continuous Quality Improvement

To complete one quality cycle, the HEI needs to get back on the road again, acting on the points that need to be improved. This means that the HEI takes the assessment results to heart, and looks for ways to enhance and transform its systems.

Although one quality cycle may be completed, the cycle does not stop and the journey continues with changing destinations. The process goes through many iterations, partly because the HEI itself is being transformed and having different expectations, and partly because the environment changes and the HEI has to adapt.

This is where the transformation happens. The HEI internalizes its VMG, sets its own quality targets, and develops sensitivity to how it is positioned in a growing complex educational environment.

PART V – DEFINITION OF TERMS⁸⁰

Terms	Definition
Accreditation	The process of assessment and review that enables a higher education program or institution to be recognized or certified as meeting appropriate standards [UNESCO Draft Toolkit for the Recognition of Foreign Qualifications, 2012).
Accreditation bodies	<p>Agencies that assess the quality of educational institutions based on a set of criteria, measured through surveys and onsite reviews by experienced accreditors.</p> <p>The following accreditation bodies are recognized by CHED:</p> <p>Under the umbrella of the Federation of Accrediting Agency of the Philippines (FAAP) –</p> <ul style="list-style-type: none"> • Philippine Accrediting Association of Schools, Colleges and Universities (PAASCU) • Philippine Association of Colleges and Universities Commission on Accreditation (PACU-COA) • Association of Christian Schools, Colleges and Universities – Accrediting Agencies Inc. (ACSCU-AAI) <p>Under the National Network of Quality Assurance Agencies, Inc. (NNQAA) –</p> <ul style="list-style-type: none"> • Accrediting Agency of Chartered Colleges and Universities in the Philippines, Inc. (AACCUP) • Association of Local Colleges and Universities Commission on Accreditation, Inc. (ALCU-COA)
Achieved learning outcomes	Learning outcomes that are actually attained by the students as opposed to intended learning outcomes.
ASEAN 2015	<p>A roadmap to achieve better regional integration of the socio-cultural, economic, and political security pillars of the Association of Southeast Asian Nations (ASEAN) member-states by 2015.</p> <p>ASEAN 2015, also known as ASEAN Community 2009-2015 will be marked by labor mobility within the region, among others.</p>
Assessment	<p>A process used to improve future performance by involving both the assessee and assessor in a thorough analysis of current performance, with the assessor providing quality feedback (Parker et al., 2001).</p> <p><i>Applied to individuals:</i> The process of evaluating the knowledge, skills or competencies of individual learners.</p> <p><i>Applied to programs and institutions:</i> The process of evaluating the educational quality of a higher education institution or program.</p> <p>[UNESCO Draft Toolkit for the Recognition of Foreign Qualifications, 2012]</p>

⁸⁰ Based on CMO No. 46, series 2012, *Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes-based and Typology-Based QA*

Terms	Definition
Assessment of learners	
<i>Direct Assessment</i>	Gathers tangible evidence of what learners have and have not learned based on learner performance that demonstrates the learning itself; can be related to standards, or quantitative. Examples are classroom assignments, presentations, test results, projects, logs, portfolios, and direct observations.
<i>Indirect Assessment</i>	Gathers evidence about how learners feel about learning and their learning environment rather than actual demonstrations of learning outcome achievement. Examples are surveys, questionnaires, interviews, focus groups, and reflective essays.
<i>Qualitative Assessment</i>	Uses flexible, naturalistic methods and is usually analyzed by looking for recurring patterns and themes. Examples are reflective writing, notes from focus groups, interviews, and observations, and online discussion threads.
<i>Quantitative Assessment</i>	Uses structured, predetermined response options that can be summarized into meaningful numbers and analyzed statistical. Examples are test scores, rubric scores, and survey ratings.
<i>Formative Assessment</i>	The gathering of information about student learning during the progression of a course or program and usually repeatedly to improve the learning of those students. Examples are reading the first lab reports of a class to assess whether some or all students in the group need a lesson on how to make them succinct and informative.
<i>Summative Assessment</i>	Done at the conclusion of the course or an activity or plan to determine or judge learner skills and knowledge or effectiveness of a plan or activity. An example is examining student final exams in a course to see if certain specific areas of the curriculum were understood less well than others, as well as for the purpose of assigning grades.
Autonomous HEIs (by evaluation)	HEIs that demonstrate exceptional institutional quality and enhancement consistent with their horizontal type through internal QA systems, and demonstrate excellent program outcomes through a high proportion of accredited programs, the presence of Centers of Excellence and/or Development, and/or international certification.
Autonomous HEIs (by legislation)	Chartered State Universities and Colleges (SUCs) and Local Colleges and Universities (LCUs) that are created by national legislation or local ordinance and whose charters are argued to give them relative autonomy.
Baldrige PQA	Philippine Quality Award (an award given by the Department of Trade and Industry in collaboration with the Development Academy of the Philippines) based on the Baldrige Criteria for Performance Excellence (leadership, strategic planning, customer focus, workforce focus, operations focus, results).

Terms	Definition
Branch of knowledge	A broad clustering of disciplines with similar objects of study, frames of reference and methodological approaches, e.g., natural sciences and engineering, social sciences, the arts and humanities, and the management sciences.
Center of Development	A designation granted by the Commission on Higher Education in recognition of a unit's evident above average performance in teaching, research and extension functions.
Center of Excellence	A designation granted by the Commission on Higher Education in recognition of a unit's exemplary performance in its teaching, research and extension functions.
Colleges	HEIs that contribute to nation building by providing educational experiences to develop adults who have the thinking, problem solving, decision-making, communication, technical, and social skills to participate in various types of employment, development activities and public discourses, particularly in response to the needs of the relevant communities they serve – e.g., geographic, imagined community (e.g. religious community or a particular public).
Competencies	<p>For purposes of CMO No. 46, series of 2012, competencies refer to the combination of knowledge, complex skills, behavior and attitude that enables an individual to perform a specific task or role.</p> <p>The literature, nevertheless, cites overlapping ways of defining or interpreting competencies that include the following:</p> <p>General cognitive ability: “an individual’s knowledge and system beliefs, formed through experience” and with their own “achievements, influences subsequent performance through expectations, attitudes and interpretations”.</p> <p>Competence-performance model: the breakdown of the notion of competence into:</p> <ol style="list-style-type: none"> (1) conceptual competence (rule-based, abstract knowledge about an entire domain); (2) procedural competence (procedures and skills needed to apply conceptual competence in concrete situations); (3) performance competencies (required to assess a problem and select a suitable strategy for its solution). <p>Modified competence-performance model: goes beyond the cognitive bias of the competence-performance model and includes the available learning and practice environments that shape competence.</p> <p>Action competence: includes all the cognitive, motivational and social prerequisites for successful learning and application and used to analyze the conditions of success in performing tasks. These include general problem solving competence; critical thinking skills; domain-general and domain-specific knowledge; realistic, positive self-confidence; and social competencies.</p> <p>Key competencies: basic competences, such as literacy, numeracy, general education; methodological competences, like problem solving, IT skills; communication skills, including writing and presentation skills; and judgment competences, such as critical thinking.</p>

Terms	Definition
	<p>Meta-competencies: skills in planning, initiating, monitoring and evaluating one's own cognitive processes; experience and knowledge about different task difficulties; knowledge about learning and problem solving; skills in using effective cognitive aids and tools, such as graphics and analogies, and learning how to learn.</p> <p>Sources:</p> <p>Weinert, F. E. (1999). <i>Concepts of Competence</i>. Published as a contribution to the OECD project, Definition and selection of competencies: Theoretical and conceptual foundations (DeSeCo). Neuchâtel: DeSeCo. Munich, Germany: Manx Planck Institute for Psychological Research;</p> <p>Winterton, J., Delamare, F. Le and Stringfellow, D. E. (2005). <i>Typology of knowledge, skills and competences: clarification of the concept and prototype</i>, Toulouse: Centre for European Research on Employment and Human Resources Groupe ESC.</p>
Course	The collection of learning experiences (e.g, lectures, experiments, academic exercises, and projects) within a particular subject area and organized to accomplish particular learning outcomes.
Deregulated (by evaluation)	HEIs that demonstrate very good institutional quality and enhancement consistent with their horizontal type through internal QA systems, and demonstrate very good program outcomes through a good proportion of accredited programs, the presence of Centers of Excellence and/or Development, and/or international certification.
Discipline	<p>An area of study constituted by defined academic research methods and objects of study, frames of reference, methodological approaches, topics, theoretical canons, and technologies.</p> <p>May also be seen as “subcultures” with their own language, concepts, tools and credentialed practitioners”.</p> <p>Source: Petts, J., Owens, S. and Bulkeley, H. (2008) “Crossing boundaries: interdisciplinary in the context of urban environments,” <i>Geoforum</i> 39 (2008) 593-601.</p>
EUR-ACE	The EUR opean AC credited E ngineer is a certificate awarded by an authorized accreditation agency to an engineering degree program which has reached the educational standards of the European Higher Education Area (EHEA).
Evaluation	A process used to judge the quality of a performance or work product against a standard (Parker et al., 2001).
Field of study	Recognized areas of specialization within a discipline or sub-discipline.
Full-time faculty	A faculty member employed by an HEI on a full-time basis.
Functional differentiation	Differentiated according to the functions of the HEIs as determined by its vision and mission.

Terms	Definition
Graduate attributes	The “qualities, skills and understandings a university community agrees its students should develop during their time with the institution and, consequently, shape the contribution they are able to make to their profession and as a citizen (Bowden et al 2000).
Graduate programs	A set of advanced courses or study, the completion of which leads to either a master’s or doctorate degree.
Hegemonic paradigm	Dominant paradigm
Higher Education	Refers to post-secondary-level education, training or research that is recognized by the relevant authorities of a party as belonging to its higher education system [UNESCO Draft Toolkit for the Recognition of Foreign Qualifications, 2012].
Higher Education Institution (HEI)	An establishment recognized by the relevant authorities of a party that provides higher education [UNESCO Draft Toolkit for the Recognition of Foreign Qualifications, 2012].
Higher Education Program	A program of study recognized by the relevant authorities of a party as belonging to its higher education system, the completion of which provides a student with higher education qualifications [UNESCO Draft Toolkit for the Recognition of Foreign Qualifications, 2012].
Horizontal Typology	<p>A functionally differentiated typology of HEIs that does not imply any hierarchy. The differentiation is along the following dimensions:</p> <ol style="list-style-type: none"> 1) qualifications and corresponding competencies of programs; 2) nature of degree programs offered; 3) qualifications of faculty members; 4) types of available learning resources and support structures available; and 5) nature of linkages and community outreach activities. <p>For the Philippines at this juncture, HEIs may be differentiated horizontally as Professional Institutions, Colleges, or Universities.</p>
Implemented learning outcomes	The implemented curriculum/syllabus to achieve specific learning outcomes.
Indexed Journals	Journals recognized as authoritative and high quality source of information in particular fields of study/disciplines because their articles are part of a citation index (e.g. Institute for Scientific Information or ISI or Sci-Verse Scopus).
Institutional accreditation	Refers to the evaluation of a whole educational institution of which the guidelines and standards shall be formulated in collaboration with the existing federations/networks of accrediting agencies and approved by CHED.
Institutional goals or Institutional outcomes	Based on its vision and mission, a statement of what the institution wants to achieve within a given timeframe.

Terms	Definition
Institutional Quality	The quality of HEIs as reflected in their Institutional Accreditation, Institutional Quality Assurance Monitoring and Evaluation (IQuAME), the Institutional Sustainability Assessment (ISA) or other evidences in the areas of governance and management, quality of teaching and learning, quality of professional exposure, research, and creative work, support for students, and relations with the community.
Institutional Quality Assurance Monitoring and Evaluation (IQuAME)	<p>Refers to a CHED-established mechanism for monitoring and evaluation of the outcomes of the programs, processes, and services of Higher Education Institutions in the key area of quality of teaching and learning as supported by governance and management; support for students; relations with the community; and management of resources.</p> <p>CHED is replacing IQuAME with the Institutional Sustainability Assessment (ISA).</p>
Institutional Sustainability	An organization's ability to address current educational needs and to have the agility and strategic management to prepare successfully for future educational, market, and operating environment.
Institutional Sustainability Assessment (ISA)	<p>A quality assurance process that assesses the institutional sustainability of an HEI in the key areas of quality of teaching and learning as supported by governance and management; support for students; relations with the community; and management of resources.</p> <p>Sensitive to the horizontal typology, it aims to:</p> <ol style="list-style-type: none"> 1) support HEIs in developing institutional systems that lead to quality outcomes, as demonstrated by students and graduates whose competencies meet internationally recognized standards when applicable and are relevant to employment; 2) support HEIs in developing a culture of quality, reflected in internal QA systems that will help them perform effectively and efficiently and meet their desired outcomes and performance targets; and 3) engage HEIs in addressing policy issues, especially those that address the need to improve the quality of higher education.
Intended learning outcomes	The learning outcomes expressed as objectives of the course or program.
International accreditation	Accreditation by a reputable international accreditation body (e.g. ABET, EUR-ACE)
Internationally agreed upon frameworks and mechanisms of global practice	Agreed upon international frameworks for professional programs such as the Washington Accord for engineering.

Terms	Definition
Learning competency-based standards	<p>Standards that are based on duly-specified learning competencies for a particular field of study or discipline.</p> <p>In an outcomes-based approach, the outcomes are the set of learning competencies that enable learners to perform complex tasks/functions/roles.</p>
Learning resources and support structures	<p>These are libraries, practicum laboratories, relevant educational resources, linkages with the relevant disciplinary and professional sectors, etc. that allow students to explore basic, advanced, and even cutting edge knowledge in a wide range of disciplines or professions.</p>
Liberal Arts programs	<p>Studies intended to provide general knowledge and intellectual skills rather than professional or occupational skills.</p> <p>Examples of liberal arts programs are those in the arts, humanities, natural sciences, social sciences, and mathematics</p>
Lifelong Learning (LLL)	<p>Lifelong learning is a process that involves the acquisition and upgrading of knowledge, skills, values and qualifications throughout all stages of a person's life — from early childhood through adulthood.</p> <p>LLL promotes the development of competencies that will enable citizens to adapt to a knowledge-based society and participate actively in all spheres of life.</p> <p>It values all forms of learning including formal learning (e.g. university-based learning), non-formal learning (e.g. skills acquired at the workplace) and informal learning (e.g. inter-generational learning).</p>
Local Accreditation	<p>The issuance of a certificate of accredited status by any of the accreditation bodies in the Philippines attesting to the quality or standards of a higher education institution or to any of its educational programs, and to the effectiveness of the management and operations of the institution offering the program, as exceeding the minimum standards or criteria for government recognition.</p>
One-size-fits-all QA System	<p>An imposed common set of quality indicators for all Philippine HEIs regardless of their mission, compelling institutions to direct their QA efforts towards meeting CHED quality indicators that may not be aligned with quality outcomes associated with their respective missions.</p>
Outcomes	<p>The benefit or change after an activity or process, such as new competencies, which may be associated with the output or the process itself.</p> <p>Within a learner-centered paradigm, outcomes are the set of learning competencies that enable learners to perform complex tasks/functions/roles.</p>

Terms	Definition
Outcomes-based education (OBE)	<p>In a nutshell, OBE implies the best way to learn is to first determine what needs to be achieved. Once the desired results or 'exit outcomes' have been determined, the strategies, processes, techniques and means are put in place to achieve the predetermined goals.</p> <p>In essence, it is a working-backwards with students as the center of the learning–teaching milieu.</p>
Outcomes-based QA	<p>Program level: A direct assessment of educational outcomes, with evaluation of the individual programs that lead to those outcomes. In this approach, the program outcomes are largely measured against the policies, standards, and guidelines of the discipline.</p> <p>Institutional Level: An audit of the quality systems of an institution, to determine whether these are sufficiently robust and effective to ensure that all programs are well designed and deliver appropriate outcomes. This approach takes into consideration the vision, mission, and goals of the HEI.</p>
Output	The direct product of any activity or the result of a process.
Paradigm	A set of assumptions, concepts, values, and practices that constitutes a way of viewing reality for the community that shares them, especially in an intellectual discipline.
Paradigm shift	<p>A change in basic assumptions, premises and frameworks.</p> <p>A change of mindsets or perspectives with real consequences for practice.</p>
Patents	Consists of exclusive rights granted by a sovereign state to an inventor or their assignee for a limited period of time in exchange for public disclosure of an invention.
Permanent faculty	Tenured faculty members who can only be removed from office for cause (e.g. incompetence, immorality) following the proper administrative procedures.
Professional Institutions	<p>HEIs that contribute to nation building by providing educational experiences to develop technical knowledge and skills at the graduate and undergraduate levels, which lead to professional practice, e.g., Engineering, Medicine, Law, IT, Management, Teacher Education, Maritime Education.</p> <p>Professional Institutions develop adults who will have the technical and practical know-how to staff the various professional sectors that are required to sustain the economic and social development of the country and the rest of the world, as well as to contribute to innovation in their respective areas.</p>

Terms	Definition
Professional programs	<p>Traditionally refers to programs whose professional practice is regulated through a licensure examination. For purposes of developing the typology, however, CHED, upon the recommendation of its Technical Panels, broadened the notion of profession-oriented practices beyond those regulated by the Professional Regulatory Commission (PRC) to cover programs with direct (tangible, observable) application of frameworks and skills in future practice.</p> <p>CHED adopted the recommendations of the Technical Panels for the classification of programs within their respective disciplinary jurisdiction. These “professional” programs include unlicensed professions like Journalism, Broadcast Communications, Management, and Information Technology, which are associated with communities of practice that are guided by a Code of Ethics.</p>
Program	<p>Broadly refers to a plan of action and a collection of activities, which aim to accomplish pre-determined objectives, e.g., in research, education, and extension.</p> <ul style="list-style-type: none"> • Degree program refers to the collection of courses and experiences which is designed and arranged to develop competencies and accomplish objectives, and lead to the awarding of a degree. • Program major refers to the primary specialization in a field of study in which the student takes a specified number of courses as part of the requirement for obtaining a degree. <p>This may also be called area of specialization, field of concentration, professional major, or just plain major (CSO, No. 42, series 2003).</p>
Program evaluation	See Outcomes-Based QA: Program level.
Program excellence	Excellence of academic programs as manifested through accreditation, Centers of Excellence and Development, and international certification.
Qualifications	A combination of academic preparation (degree completion) augmented by subsequent activities that maintain or establish preparation for a particular task, job, role or profession.
Quality	<p>For quality assurance purposes, CHED adopts the notion of quality as:</p> <ul style="list-style-type: none"> • “Fitness for purpose”, which is generally used by international bodies for assessment and accreditation. Requires the translation of the institution’s vision, mission, and goals into its learning outcomes, programs, and systems; • “Exceptional”, which means being distinctive; exceeding very high standards; or conformance to standards based on a system of comparability using criteria and ratings; and • Quality, as “developing a culture of quality”, is the transformational dimension of the CHED notion of quality. <p>[Harvey, L, Green D (1993). “Defining quality”. Assessment and Evaluation in Higher Education 18(1):9-34].</p>

Terms	Definition
Quality Assurance	<p>An ongoing process of evaluating and enhancing the quality of a higher education system, institution, or program to assure stakeholders that acceptable standards of education, scholarships, and resources for delivery are being maintained.</p> <p>QA does not mean merely specifying the standards or specifications against which to measure or control quality. Rather, quality assurance is about ensuring that there are mechanisms, procedures and processes in place to ensure that the desired quality, however defined and measured, is delivered [Church, C.H. (1988). "The Qualities of Validation". <i>Studies in Higher Education</i> 13:27-43].</p>
Refereed journals	Scholarly journals peer-reviewed by experts prior to publication. The reviews are often blind, i.e., the names of the author and the reviewer are withheld.
Regulated HEIs	Institutions, which still need to demonstrate good institutional quality and program outcomes
Reputable academic presses	University presses or academic publishers known for the good quality of their publications
Six Sigma Process	A system of accreditation that lets the market know whether an organization has complied with rigorous standards for the area accredited. It usually covers a training firm's qualifications, an instructor's knowledge and competency, adequacy of curriculum content and the robustness of an internal corporate program.
Skills	<p>A "goal-directed, well-organized behavior that is acquired through practice and performed with economy of effort" [Proctor, R. W., & Dutta, A. (1995). <i>Skill acquisition and human performance</i>. Thousand Oaks, CA: Sage: 18].</p> <p>There are different types of skills:</p> <ul style="list-style-type: none"> • the skill of making distinctions or judgments or perceptual skills; • the skill in selecting the appropriate response or response skills; • the manual aspects of performance or motor skills; and • the skill to solve concrete problems or problem-solving skills <p>[Winterton, J., Delamare, F. Le and Stringfellow, D. E. (2005). <i>Typology of knowledge, skills and competences: clarification of the concept and prototype</i>, Toulouse:Centre for European Research on Employment and Human Resources Groupe ESC.]</p> <p>Note that while skills and competencies are not the same conceptually, the broad notion of skills as encompassing attitudes and practical skills and the different interpretations of "competencies" account for the interchangeable use of the terms "skills" and "competencies" in the literature.</p>

Terms	Definition
UNESCO Recognition of Comparable qualifications, degrees, diplomas, certificates in the Asia-Pacific region (1983)	<p>Refers to the 1983 Regional Convention of Studies, Diplomas and Degrees in Higher Education in Asia and the Pacific, a legally binding instrument which aims to promote and facilitate academic mobility in the Asia-Pacific region.</p> <p>The Convention was revised in 2011 to hasten the effort of determining the comparability of programs across the region. The revised Convention, which is in the process of ratification by UNESCO member states in the region, is also referred to as the Tokyo Convention.</p>
Undergraduate Program	Refers to a set of four or five-year courses (possibly three for some programs when K to 12 is implemented) or study focused on applied knowledge and hands on learning, the completion of which leads to a baccalaureate degree.
Universities	<p>HEIs that contribute to nation building by providing highly specialized educational experiences to train experts in the various technical and disciplinal areas and by emphasizing the development of new knowledge and skills through research and development.</p> <p>The focus on developing new knowledge is emphasized from the basic post-secondary (i.e., baccalaureate) academic programs through the doctoral programs. Thus, a research orientation is emphasized in the Bachelor, Master's and doctoral degree programs.</p> <p>Universities contribute to nation building by producing experts, knowledge, and technological innovations that can be resources for long-term development processes in a globalized context.</p>
Vertical Typology	<p>Refers to the classification of HEIs according to three elements of quality:</p> <ol style="list-style-type: none"> 1) alignment and consistency of the learning environment with the institution's vision, mission, and goals; 2) demonstration of exceptional learning and service outcomes; and 3) development of a culture of quality.
Washington Accord	<p>Signed in 1989, it is an international agreement among bodies responsible for accrediting engineering degree programs.</p> <p>It recognizes the substantial equivalency of programs accredited by those bodies and recommends that graduates of programs accredited by any of the signatory bodies be recognized by the other bodies as having met the academic requirements for entry into the practice of engineering.</p>

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ANNEX 1 – CRITERIA FOR COMMITMENT TO EXCELLENCE: EQUATIONS TO DETERMINE POINTS FOR LOCAL ACCREDITATION

The points for local accreditation take into account several factors.

1) Proportion of accredited programs

It is the proportion of accredited programs in relation to the total number of programs covered by accreditation that is measured.

For example:

- HEI X has five Level II-accredited programs in a total of 20 programs that can be accredited, while HEI Y has also five Level II-accredited programs but in a total of 10 programs that can be accredited.
- HEI Y will have more points than HEI X because it has a higher proportion of Level II accredited programs.

2) Level of accreditation

There are increasing weights (values) from Level I to Level IV.

3) Undergraduate/graduate programs

The weights for undergraduate (UG) or graduate (G) programs depend on HEI type and the proportion of programs at the two levels.

Total points for local accreditation is the sum of undergraduate and graduate components:

$$\text{Accreditation} = \text{UG Accreditation} + \text{G Accreditation}$$

The weights for the UG and G components depend on the percentage of enrollment in the graduate or undergraduate programs. The points for accreditation are based on the sum of the ratios for the different accreditation levels, multiplied by a value for the level (refer to Table A1-1).

Table A1-1. Weights for Accreditation Levels

Level	Inputs based	Outcomes-based (Levels III & IV)
Level IV	1.25	1.50
Level III	1.00	1.25
Level II	0.75	
Level I	0.50	

Note: After two years, it is recommended that accrediting agencies use the outcomes-based approach in their instruments for which higher weights will be given.

The UG and G accreditation components are given in Equations 1 and 2.

Equation 1:

$$UG\ Accred = \left\{ \left(\frac{UG4}{UG} \times 1.25 \right) + \left(\frac{UG3}{UG} \times 1.00 \right) + \left(\frac{UG2}{UG} \times 0.75 \right) + \left(\frac{UG1}{UG} \times 0.5 \right) \right\} \times Wt$$

where

Wt	= Percentage of undergraduate enrollment, e.g., 90% = 90
UG Accred	= the points earned from the accredited undergraduate programs
UG	= total number of UG programs offered
UG4	= number of UG programs accredited at Level IV
UG3	= number of UG programs accredited at Level III
UG2	= number of UG programs accredited at Level II
UG1	= number of UG programs accredited at Level I

Equation 2:

$$G\ Accred = \left\{ \left(\frac{G4}{G} \times 1.25 \right) + \left(\frac{G3}{G} \times 1.00 \right) + \left(\frac{G2}{G} \times 0.75 \right) + \left(\frac{G1}{G} \times 0.5 \right) \right\} \times Wt$$

where

Wt	= Percentage of graduate enrollment, e.g., 10%=10
G Accred	= the points earned from the accredited graduate programs
G	= total number of G programs offered
G4	= number of G programs accredited at Level IV
G3	= number of G programs accredited at Level III
G2	= number of G programs accredited at Level II
G1	= number of G programs accredited at Level I

ANNEX 2 – INSTITUTIONAL SUSTAINABILITY ASSESSMENT FRAMEWORK

The Institutional Sustainability Assessment (ISA) Framework of CHED consists of five key result areas (KRAs), each of which has one or more criteria, as shown in Table A2-1. Tables A2-2 and A2-3 show the ISA Indicators by HEI Type while Table A2-4 presents the rubric for each indicator. The minimum scores to qualify for autonomous and deregulated status are shown in Table A2-5.

Table A2-1. ISA: KRA Indicators and Criteria

KRA 1: GOVERNANCE AND MANAGEMENT	
Core Indicator: Governance	Criterion: The institution's governance arrangements demonstrate probity, strategic vision, accountability, awareness and management of risk, and effective monitoring of performance.
Core Indicator: Management	Criterion: The institution's management, financial control, and quality assurance arrangements are sufficient to manage existing operations and to respond to development and change.
Indicator: Enabling Features	Criterion: The institution has enabling features such as the use of Information and Communication Technology (ICT) for more efficient and effective management; and a viable, sustainable and appropriate resource generation strategy to support its development plans.
KRA 2: QUALITY OF TEACHING AND LEARNING	
Core Indicator: Setting and Achieving Program Standards	<p>Criterion 1: Program Approval. The institution sets the objectives and learning outcomes of its programs at appropriate levels, and has effective mechanisms to ensure that its programs achieve those objectives and enable students to achieve the intended outcomes (including board passing rates).</p> <p>Criterion 2: Program Monitoring and Review. The institution has effective arrangements for monitoring the effectiveness of its programs.</p> <p>Criterion 3: Action to Strengthen Programs. The institution takes effective action to address weakness, build on strengths, and to enhance performance by the dissemination of good practice.</p>
Core indicator: Faculty Profile	Criterion: The institution has an adequate number of faculty with the appropriate expertise and competence to teach the courses offered by the institution.
Core Indicator: Appropriate Learning Resources	Criterion: The institution makes effective use of learning resources, such as library resources, laboratories, and information and communications technology, to support student learning.
KRA 3: QUALITY OF PROFESSIONAL EXPOSURE, RESEARCH, AND CREATIVE WORK	
Indicator: Professional Exposure	Criterion: The institution has programs that allow students to practice their learned competencies in view of their future careers, such as programs for practicum, internship, on-the-job training (OJT), and case writing (for graduate level).
Indicator: Research Capability	Criterion: The institution has a research community of faculty, students and post-doctoral research workers that fosters and supports creative research and other advanced scholarly activity.
Indicator: Creative Work and/or Innovation	Criterion: The institution has programs that promote creative work in the arts and/or innovation in science and technology and in other fields of study.

Table A2-1. (con't)

KRA 4: SUPPORT FOR STUDENTS	
Indicator: Equity and Access	<p>Criterion 1: Recruitment, Admission, and Academic Support.</p> <p>The institution is effective in recruiting, admitting, supporting, and graduating students, including those from indigenous groups, the handicapped, low-level income classes, foreign students, and other special groups.</p> <p>Criterion 2: Student Scholarships.</p> <p>The institution operates effective arrangements to direct scholarships and study grants on merit to support the most able students in programs that develop competences needed to support the Filipino economy and to enable the country to compete in global labor markets.</p>
Core Indicator: Student Services	Criterion: The institution has programs for student services, to support the non-academic needs of the students.
KRA 5: RELATIONS WITH THE COMMUNITY	
Core Indicator: Relevance of Programs	Criterion: The institution offers programs that take into consideration the socio-cultural, economic, and developmental needs of the country at local, regional, and national levels, as well as the need for the country to compete effectively in global markets.
Indicator: Networking and Linkages	Criterion: The institution is valued as a partner by other higher education institutions; professional, government, and/or non-government organizations; and industry, within the Philippines and internationally.
Indicator: Extension Programs	Criterion: The institution is valued by its local community as a provider of extension programs that are responsive to the needs of the community for people empowerment and self-reliance.

Table A2-2. ISA Indicators by HEI Type

Indicator	Professional Institute	College	University
Governance and Management			
Governance	Core	Core	Core
Management	Core	Core	Core
Enabling Features	Indic	Indic	Indic
Quality of Teaching and Learning			
Setting and Achieving Program Standards	Core	Core	Core
Faculty Profile	Core	Core	Core
Appropriate Learning Resources	Core	Core	Core
Quality of Professional Exposure, Research, and Creative Work			
Professional Exposure	Req	Indic	Indic
Research Capability	Indic	Indic	Req
Creative Work and/or Innovation	Indic	Req	Indic
Support for Students			
Equity and Access	Indic	Indic	Indic
Student Services	Core	Core	Core
Relations with the Community			
Relevance of Programs	Core	Core	Core
Networking and Linkages	Req	Indic	Req
Extension Programs	Indic	Req	Indic

Legend: **Core** – Core indicator; **Req** – Required indicator; **Indic** – Indicator

Table A2-3. Summary of ISA Indicators according to HEI Type

Professional Institutions	
Core Indicators:	Governance, Management, Setting and Achieving Program Standards, Faculty Profile, Use of ICT and Learning Resources, Equity and Access, Student Services, Relevance of Programs
Required Indicators:	Professional Exposure, Networking and Linkages
Optional Indicators:	Enabling Features, Research Capability, Creative Work and/or Innovation, Extension Programs
Colleges	
Core Indicators:	Governance, Management, Setting and Achieving Program Standards, Faculty Profile, Use of ICT and Learning Resources, Equity and Access, Student Services, Relevance of Programs
Required Indicators:	Creative Work and/or Innovation, Extension Programs
Optional Indicators:	Enabling Features, Professional Exposure, Research Capability, Networking and Linkages
Universities	
Core Indicators:	Governance, Management, Setting and Achieving Program Standards, Faculty Profile, Use of ICT and Learning Resources, Equity and Access, Student Services, Relevance of Programs
Required Indicators:	Research Capability, Networking and Linkages
Optional Indicators:	Enabling Features, Professional Exposure, Creative Work and/or Innovation, Extension Programs

Table A2-4. Rubric for Rating Each Indicator

Rating	Description
4	The criterion/criteria for the indicator is/are fully met, and its elements are achieved at a level of excellence that provides a model for others.
3	The criterion/criteria for the indicator is/are met, with most elements demonstrating good practice.
2	The criterion/criteria for the indicator is/are met in most respects, but improvement is needed to overcome weaknesses in some elements.
1	The criterion/criteria for the indicator is/are met in some respects, but much improvement is needed to overcome weaknesses.
0	The criterion is not met.

Table A2-5. Minimum Scores to Qualify for Autonomous and Deregulated Status

Indicator	Professional Institution	College	University
AUTONOMOUS			
<i>Governance and Management</i>			
C - Governance	3*	3*	3*
C - Management	3*	3*	3*
I - Enabling Features			
<i>Quality of Teaching and Learning</i>			
C - Setting and Achieving Program Standards	3*	3*	3*
C - Faculty Profile	3*	3*	3*
C - Appropriate Learning Resources	3*	3*	3*
<i>Quality of Professional Exposure, Research, and Creative Work</i>			
I - Professional Exposure	3*		
I - Research Capability			3*
I - Creative Work and/or Innovation		3*	
<i>Support for Students</i>			
C - Equity and Access	3*	3*	3*
C - Student Services	3*	3*	3*
<i>Relations with the Community</i>			
C - Relevance of Programs	3*	3*	3*
I - Networking and Linkages	3*		3*
I - Extension Programs		3*	
Minimum Average Score = 2.75			
No score below 2			
DEREGULATED			
<i>Governance and Management</i>			
C - Governance	3*	3*	3*
C - Management	3*	3*	3*
I - Enabling Features			
<i>Quality of Teaching and Learning</i>			
C - Setting and Achieving Program Standards	3*	3*	3*
C - Faculty Profile	3*	3*	3*
C - Appropriate Learning Resources	3*	3*	3*
I - Professional Exposure	3*		
I - Research Capability			3*
I - Creative Work and/or Innovation		3*	
<i>Support for Students</i>			
C - Equity and Access	2*	2*	2*
C - Student Services	3*	3*	3*
<i>Relations with the Community</i>			
C - Relevance of Programs	2*	2*	2*
I - Networking and Linkages	2*		2*
I - Extension Programs		2*	
Minimum Average Score = 2.50			
No score below 1			

*Required, C = Core, I = Indicator

ANNEX 3 – SAMPLE CURRICULUM MAPS FROM THE NURSING PROGRAM

Mapping of Nursing Program Outcomes by Year Level

First Year Level Outcomes: The student 1) demonstrates self-awareness, 2) communicates effectively, 3) discusses beginning theories and principles, 4) works effectively as a team, 5) demonstrates background on the laws (national and traditional).												
PROGRAM OUTCOMES First Year	Theoretical Foundation	Anatomy and Physiology	NCM 100- Fundamentals of Nursing	Health Assessment	GE - Purposive Communication	Chem 2 - Biochemistry	GE – Understanding Self	STS – Science, Technology and Society	Logic with Critical Thinking	GE – Bioethics	GE- Readings in Philippine History	GE – Arts Appreciation
1. Apply knowledge of physical, social, natural and health sciences and humanities in the practice of nursing.	I	IP	IP	IP/L	I/L	IP/L	I/L	IP/L	IP/L	I/L	I/L	I
2. Provide safe, appropriate and holistic care to individuals, families, population groups and communities utilizing nursing process.	I	IP	IP	IP	I	I	I	I	I	I	I	I
3. Apply guidelines and principles of evidence-based practice in the delivery of care in any setting.	I	I	I	I	I	I	I	I	I	I	I	I
4. Practice nursing in accordance with existing laws, legal, ethical and moral principles.	I	I	IP	IP	I	IP	IP	I	I	IP	I	I
5. Communicate effectively in writing, speaking and presenting using culturally-appropriate language.	I	IP	I	I	IP	IP	I	I	I	I	I	I
6. Document and report on client care accurately and comprehensively.	I	-	IP	IP	-	-	-	-	-	-	-	-
7. Work effectively in teams, in collaboration with other disciplines and multi-cultural teams.	I	I	I	I	I	I	I	I	I	I	I	I
8. Practice beginning management and leadership skills in the delivery of client care.	-	-	IP	IP	-	-	-	-	-	-	-	-
9. Conduct research with an experienced researcher.	I	I	-	-	I	I	-	I	I	-	-	-
10. Engage in lifelong learning with a passion to keep current with national and global developments in general, and nursing and health developments in particular.	I	I	I	I	I	I	I	I	I	I	I	I
11. Demonstrate responsible citizenship and pride of being a Filipino.	I	I	I	-	I	-	IP	I	I	IP	IP	IP

Legend: I - Introduced concepts/principles; P - Practiced with supervision; D - Demonstrated across different clinical setting with minimal supervision

2nd year Level Outcomes: The student demonstrates safe, appropriate, and holistic care, utilizing the nursing process, in the context of a normal and a high-risk family, as well as mother and child in any health setting.

PROGRAM OUTCOMES Second Year	NCM 101	CHN Community Health Nursing	Microbiology & Parasitology	Contemporary World	Health Education	NCM 102	Nutrition and Diet Therapy	Pharmacology	Nursing Informatics	Math, Science and Technology (Elective)	Pathophysiology
1. Apply knowledge of physical, social, natural and health sciences and humanities in the practice of nursing.	P/L	P/L	P/L	I/L	PD/L	D/L	D/L	P/L	IP/L	P/L	I/L
2. Provide safe, appropriate and holistic care to individuals, families, population groups and communities utilizing nursing process.	PD	PD	IP	IP	PD	D	D	PD	PD	P	I
3. Apply guidelines and principles of evidence-based practice in the delivery of care in any setting.	P	P	I	I	I	P	P	P	P	P	I
4. Practice nursing in accordance with existing laws, legal, ethical and moral principles.	P	P	P	I	IP	D	D	P	P	-	I
5. Communicate effectively in writing, speaking and presenting using culturally-appropriate language.	P	P	P	P	D	D	P	P	D	P	I
6. Document and report on client care accurately and comprehensively.	D	D	P	P	D	D	D	P	D	-	I
7. Work effectively in teams, in collaboration with other disciplines and multi-cultural teams.	P	D	P	P	P	D	P	P	D	P	I
8. Practice beginning management and leadership skills in the delivery of client care.	P	P	I	I	D	D	P	I	P	I	I
9. Conduct research with an experienced researcher.	P	P	IP	I	I	P	I	I	IP	IP	I
10. Engage in lifelong learning with a passion to keep current with national and global developments in general, and nursing and health developments in particular.	P	D	P	D	D	P	D	P	P	IP	I
11. Demonstrate responsible citizenship and pride of being a Filipino.	D	D	D	D	D	D	D	D	D	D	I

Legend: I - Introduced concepts/principles; P - Practiced with supervision; D - Demonstrated across different clinical setting with minimal supervision

3rd year Level Outcomes: The student demonstrates safe, appropriate, and holistic care, utilizing the nursing process, in the context of individuals, families and population group with physiologic and psychosocial alterations and maladaptive patterns of behavior in community, hospital and other healthcare settings.											
PROGRAM OUTCOMES Third Year	NCM 103	GE Math in the Modern World	Health Economics	GE Elective Arts & Humanities	NCM 104	NCM 105	Nursing Research 1	GE Elective - Bioethics	Rizal	Spiritual Care (Elective)	Gerontological Nursing
1. Apply knowledge of physical, social, natural and health sciences and humanities in the practice of nursing.	PD	PD	PD	PD	PD	PD	PD	PD	I		
2. Provide safe, appropriate and holistic care to individuals, families, population group and community utilizing nursing process.	PD	PD	PD	P	PD	PD	PD	PD	I		
3. Apply guidelines and principles of evidence-based practice in the delivery of care.	PD	PD	PD	PD	PD	PD	PD	PD	I		
4. Practice nursing in accordance with existing laws, legal, ethical and moral principles.	PD	PD	PD	PD	PD	PD	PD	PD	I		
5. Communicate effectively in speaking, writing and presenting using culturally-appropriate language.	PD	PD	PD	PD	PD	PD	PD	PD	I		
6. Report and document up-to-date client care accurately and comprehensively.	PD	PD	P	D	D	D	P	D	I		
7. Work effectively in collaboration with inter-, intra- and multi-disciplinary and multi-cultural teams.	D	D	D	D	D	D	D	D	I		
8. Practice beginning management and leadership skills in the delivery of client care.	PD	PD	D	D	D	D	PD	PD	I		
9. Conduct research with an experienced researcher.	P	P	P	P	P	P	P	P	I		
10. Engage in lifelong learning with a passion to keep current with national and global developments in general, and nursing and health developments in particular.	PD	PD	P	D	I	PD	PD	I	I		
11. Demonstrate responsible citizenship and pride of being a Filipino.	D	-	D	-	D	D	D	D	PD		

Legend: I - Introduced concepts/principles; P - Practiced with supervision; D - Demonstrated across different clinical setting with minimal supervision

4th year Level Outcomes: The student manages safe, appropriate, and holistic care, utilizing the nursing process, in the context of groups of clients (individuals, families, population groups and communities) at risk and/or with alterations or in varying health status.

PROGRAM OUTCOMES Fourth Year	NCM 106-	Nursing Research 2	NCM 107 (RLE)	NCM 107B	Intensive Nursing Practicum	Nursing Leadership and Management with RLE	Practicum	Foreign Language (Elective)	Emergency and Disaster Nursing
1. Apply knowledge of physical, social, natural and health sciences and humanities in the practice of nursing.	D	D	D	D	D				
2. Provide safe, appropriate and holistic care to individuals, families, population group and community utilizing nursing process.	D	D	D	D	D				
3. Apply guidelines and principles of evidence-based practice in the delivery of care.	D	D	D	D	D				
4. Practice nursing in accordance with existing laws, legal, ethical and moral principles.	D	D	D	D	D				
5. Communicate effectively in speaking, writing and presenting using culturally-appropriate language.	D	D	D	D	D				
6. Report and document up-to-date client care accurately and comprehensively.	D	D	D	D	D				
7. Work effectively in collaboration with inter-, intra- and multi-disciplinary and multi-cultural teams.	D	D	D	D	D				
8. Practice beginning management and leadership skills in the delivery of client care.	D	D	D	D	D				
9. Conduct research with an experienced researcher.	D	D	D	D	D				
10. Engage in lifelong learning with a passion to keep current with national and global developments in general, and nursing and health developments in particular.	D	D	D	D	D				
11. Demonstrate responsible citizenship and pride of being a Filipino.	D	D	D	D	D				

Legend: I - Introduced concepts/principles; P - Practiced with supervision; D - Demonstrated across different clinical setting with minimal supervision

ANNEX 4 – RECOMMENDED VERBS FOR WRITING LEARNING OUTCOMES

(Adapted from BCIT (2003) and PATE Module on Assessment and Evaluation)

ADAPTED FROM THE REVISED BLOOM'S TAXONOMY

COGNITIVE (K)

REMEMBER	UNDERSTAND	APPLY	ANALYZE	EVALUATE	CREATE
Retrieve knowledge from long-term memory	Construct meaning from instructional messages, including oral, written, graphic communication	Carry out/use procedure in a given situation	Break material into constituent parts; determine how parts relate to one another and to an overall structure or purpose	Make judgments based on criteria and standards	Put elements together to form coherent or functional whole; reorganize elements into a new pattern or structure
<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>
<ul style="list-style-type: none"> Define Describe Label List Match Recall Recognize State 	<ul style="list-style-type: none"> Classify Compare Discuss Exemplify Explain Identify Illustrate Infer Interpret Predict Report Review Summarize Translate 	<ul style="list-style-type: none"> Apply Change Choose Demonstrate Execute Implement Prepare Solve Use 	<ul style="list-style-type: none"> Analyze Attribute Debate Differentiate Distinguish Examine Organize Research 	<ul style="list-style-type: none"> Appraise Check Critique Judge 	<ul style="list-style-type: none"> Compose Construct Create Design Develop Formulate Generate Invent Make Organize Plan Produce Propose

PSYCHOMOTOR⁸¹ (S)

PERCEIVE	SET	RESPOND AS GUIDED	ACT	RESPOND OVERTLY	ADAPT	ORGANIZE
Senses cues that guide motor activity	Is mentally, emotionally, physically ready to act	Imitates and practices skills	Performs acts with increasing efficiency, confidence, ad proficiency	Performs acts automatically	Adapts skill sets to solve a problem	Creates new patterns for specific situations
<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>
<ul style="list-style-type: none"> • Detect • Differentiate • Distinguish • Identify • Observe • Recognize • Relate • Describe the perception • Describe the sensation: <ul style="list-style-type: none"> ○ Hear ○ Listen ○ See ○ Smell ○ Taste 	<ul style="list-style-type: none"> • Assume a stance • Display • Perform motor skills • Position the body • Proceed • Show 	<ul style="list-style-type: none"> • Copy • Duplicate • Imitate • Operate under supervision • Practice • Repeat • Reproduce 	<ul style="list-style-type: none"> • Assemble • Calibrate • Complete with confidence • Conduct • Construct • Demonstrate • Dismantle • Fix • Execute • Improve efficiency • Make • Manipulate • Measure • Mend • Organize • Produce 	<ul style="list-style-type: none"> • Act habitually • Control • Direct • Guide • Manage • Perform <p><i>Note: Same verbs as "ACT", but with modifiers describing the performance, e.g., faster, better, more accurate, outstanding, etc.</i></p>	<ul style="list-style-type: none"> • Adapt • Alter • Change • Rearrange • Reorganize • Revises 	<ul style="list-style-type: none"> • Arrange • Build • Compose • Construct • Create • Design • Originate • Make

⁸¹Dave (1967), Simpson (1972), and Harrow (1972; mainly used for Physical Education) separately developed the Psychomotor set. The one used here is based on Simpson.

AFFECTIVE (A)

RECEIVE	RESPOND	VALUE	ORGANIZE	INTERNALIZE (CHARACTERIZE)
Selectively responds to stimuli	Responds to stimuli	Attaches value or worth to something	Conceptualizes value and resolves conflict between this value and other values	Integrate the value into a value system that controls behavior
<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>
<ul style="list-style-type: none"> • Acknowledge • Choose • Demonstrate awareness • Demonstrate tolerance • Locate • Select 	<ul style="list-style-type: none"> • Answer • Communicate • Comply • Contribute • Cooperate • Discuss • Participate willingly • Volunteer 	<ul style="list-style-type: none"> • Adopt • Assume responsibility • Behave according to • Choose • Commit • Express • Initiate • Justify • Propose • Show concern • Use resources to 	<ul style="list-style-type: none"> • Adapt • Adjust • Arrange • Balance • Classify • Conceptualize • Formulate • Organize • Prepare • Rank • Theorize 	<ul style="list-style-type: none"> • Act upon • Advocate • Defend • Exemplify • Influence • Perform • Practice • Serve • Support

ANNEX 5 – SAMPLE SYLLABUS

Ch 101 - General Chemistry (Lecture and Laboratory)

Name of Faculty: _____ MWF, 9-10, Rm 100, Chemistry Hall; Th 8-12, Chemistry Lab

A. Course Description

This course covers fundamental chemistry concepts and theories for science and engineering majors. Topics covered include atomic structure, the periodic table and properties of elements, stoichiometry, introduction to aqueous solution chemistry, thermochemistry, electronic structure and chemical bonding, molecular geometry, intermolecular forces, and properties of gases and the condensed phases.

B. Course Objectives

By the end of the course, you should be able to: 1) describe the world of atoms and molecules and discuss basic concepts and their applications; 2) accurately observe and describe chemical phenomena; 3) Demonstrate logical, analytical and critical thinking inherent in the practice and process of science; 4) apply your basic knowledge of the atoms and molecules, fundamental properties of matter, its transformations, classification, nomenclature, structure and reactivity to actual situations; and 5) apply computational skills in gas laws, stoichiometry and thermochemistry.

C. Course Outline and Timeframe (tentative schedule)

Week	Topic
1	Introduction to & Overview of the Course; The Atomic View of Matter
2	Atoms, Molecules, Ions; The Periodic Table; Mole, Molar Mass, % Composition
3	Chemical Formulas and Equations; Solution Stoichiometry; Chemical Reactions in Water: Precipitation, Acid-Base
4	Chemical Reactions in Water: Oxidation; FIRST LONG TEST
5	Gases; Ideal Gas Equation and Applications; Gas Mixtures and Partial Pressures
6	Kinetic Molecular Theory; Effusion/Diffusion; Real Gases
7	Thermochemistry; Heats of Reaction; Calorimetry
8	Hess's Law; Standard Heats of Reaction; SECOND LONG TEST
9	Nature of Light; Atomic Spectra
10	Quantum Theory and Atomic Structure; Chemical Periodicity
11	Chemical Bond
12	Molecular Geometry; Bonding Theories
13	Bonding Theories; THIRD LONG TEST
14	Intermolecular forces: Properties of Liquids and Solids, Phase Changes
15	The Solution Process, Concentration and Properties of Solutions
16	Colligative Properties, FOURTH LONG TEST
17	Chemical Kinetics; Activation Energy and Reaction Mechanisms; Summary and Review
18	FINAL EXAM

D. Required Reading (Textbook)

Silberberg, Martin, *Chemistry: The Molecular Nature of Matter and Change*, NY: McGraw-Hill, 2012.

E. Suggested Readings and References

F. Course Requirements

G. Grading System

H. Classroom Policies

I. Consultation Hours

ANNEX 6 – SAMPLE LEARNING PLAN

Ch 101 - General Chemistry (Lecture/Lab) - Name of Faculty - MWF, 9-10, Rm 100, Chemistry Hall; Th 8-12, Chemistry Lab

Learning Outcome	Topic	Methodology	Resources		Assessment
Describe the world of atoms and molecules and discuss basic concepts and their applications	<ul style="list-style-type: none"> The Atomic View of Matter Atoms, Molecules, Ions The Periodic Table Mole, molar mass, % composition Chemical Equations; Solution Stoichiometry 	Demonstration Lecture Visualization exercise Problem solving Experiment	LCD projector Paper and pen Atomic models Chemicals	Glassware Lab hardware Laboratory Balance	Drawing of atomic models Problem-solving Performance of experiments Lab report
Accurately observe and describe chemical phenomena	<ul style="list-style-type: none"> Chemical Reactions in water Gases Applications of Ideal Gas Equation Gas Mixtures and Partial Pressures 	Demonstration Lecture Problem solving Experiment	LCD projector Paper and pen Chemicals Glassware	Lab hardware Laboratory Balance	Problem-solving Performance of experiments Lab report Discussion of concepts
Apply basic knowledge of atoms and molecules, properties of matter, classification, nomenclature, structure and reactivity to actual situations	<ul style="list-style-type: none"> Kinetic Molecular Theory Effusion and Diffusion Thermochemistry Heats of Reaction 	Demonstration Lecture Problem solving Experiment	LCD projector Paper and pen Atomic models Chemicals	Glassware Lab hardware Laboratory Balance	Problem-solving Performance of experiments Lab report Discussion of concepts
Demonstrate logical, analytical and critical thinking inherent in the practice and process of science	<ul style="list-style-type: none"> Real Gases Calorimetry Hess's Law; Standard Heats of Reaction 	Problem solving Experiment	Paper and pen Chemicals Glassware	Lab hardware Laboratory Balance	Problem-solving Experiment design Lab report
Apply computational skills in gas laws, stoichiometry and thermochemistry	<ul style="list-style-type: none"> Gas laws Thermochemistry Stoichiometry 	Lecture Problem solving Experiment	Paper and pen Chemicals Glassware	Lab hardware Laboratory Balance	Performance of experiments Problem-solving Lab report
Describe the world of atoms and molecules and discuss basic concepts and their applications	<ul style="list-style-type: none"> Nature of Light; Atomic Spectra Quantum Theory and Atomic Structure Chemical Periodicity Chemical bond Molecular Geometry; Bonding Theories 	Demonstration Lecture Problem solving Experiment	LCD projector Paper and pen Atomic models Chemicals	Glassware Lab hardware Laboratory Balance	Drawing of models Performance of experiments Problem-solving Lab report
Apply your basic knowledge of the atoms and molecules, fundamental properties of matter, its transformations, classification, nomenclature, structure and reactivity to actual situations	<ul style="list-style-type: none"> Intermolecular forces Properties of Liquids and Solids Phase Changes The Solution Process Concentration and properties of solutions Chemical Kinetics Activation Energy; Reaction Mechanisms 	Demonstration Lecture Problem solving Experiment	LCD projector Paper and pen Atomic models Chemicals	Glassware Lab hardware Laboratory Balance	Problem-solving Experiment design Performance of expts Lab report Discussion of concepts

Note: This example is intended for use of the teacher

ANNEX 7 – PROGRAM OUTCOMES – PERFORMANCE INDICATORS – ASSESSMENT EVALUATION METHODS – STANDARDS MATRIX

Technical Panel for Engineering

PO Code	PO Statement	Performance Indicators (PI)	Codes of Key Course(s) for the PI(s)	Assessment Methods			Evaluation Method(s)	Standards	Evaluator's Comments
				A1	A2	A3			
a		1							
		2							
		3							
b		1							
		2							
		3							
c		1							
		2							
		3							
d		1							
		2							
		3							
e		1							
		2							
		3							



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