Paradigm Shift to Outcomes-Based Education

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CHED Region 4
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Outline of Presentation

1. Introduction - Rationale
2. Basic concepts of outcomes-based education (OBE) and outcomes-based teaching and learning (OBTL)
3. Implementation of Outcomes-Based Education (OBE) at the institutional level and Outcomes-Based Teaching and Learning(OBTL) at the classroom level
4. CHED OBE-related Requirements and Monitoring
5. Summary

Intended Learning Outcomes

At the end of this session, the participants should be able to:

1. Explain the basic concepts of outcomes-based education (OBE) and outcomes-based teaching and learning (OBTL)
2. Plan and implement a program on outcomes-based education at an institutional level and outcomes-based teaching and learning at the classroom level.

Rationale : OBE in the Philippines

The need to implement OBE OBTL

CHED Memorandum Order No. 37 s. 2012.

Policies, standards and guidelines in the **establishment of an outcomes-based education(OBE) system in higher education institutions offering engineering programs**

The need to implement OBE OBTL

CHED Memorandum Order No. 46 s. 2012.

Policy-standard to enhance quality assurance (QA) in Philippine higher education through an **outcomes-based and typology-based QA**

The need to implement OBE OBTL

CHED CMO 20 s.2015. Consolidated Policies , Standards, and Guidelines for BS Marine Transportation and BS Marine Engineering Programs required the **submission of revised detailed syllabi in all courses using the CHED prescribed format incorporating the elements of OBE/OBTL**

The need to implement OBE OBTL

The CHED Memorandum Order No.17 s. 2015. Revised Implementing Guidelines for CHED COE COD for Engineering Programs specifies **OBE Implementation as a major requirement equivalent to 30 points**

The need to implement OBE OBTL

The ITE COD COE Criteria requires complete teaching portfolio **showing OBE implementation**

The need to implement OBE OBTL

The PACUCOA level 4 Criterion 1 . Excellent outcomes of the program in teaching and learning requires **OBE/OBTL elements** such as :

- Constructive alignment of teaching and learning goals from the institutional level to program level
- Implementation of TLAs towards the attainment of learning outcomes
- Assessment and Evaluation of Learning Outcomes
- Continuous Improvement

The need to implement OBE OBTL

The ABET, PTC and PICAB accreditation are outcomes-based accreditation requiring a set of program outcomes, assessment and evaluation of the attainment of each outcomes and continuous quality improvement.

The need to implement OBE OBTL

CHED Administrative Order No. 01 s. 2014

"…..the revised Policies, Standards and Guidelines (PSGs) that Technical Committees and Panels are tasked to produce shall reflect the shift to **learning competency based standards/outcomes-based education**……"

Compliance of HEIs (Section IV of CHED AO 01.s. 2014)

Using the CHED Implementation Handbook for OBE and ISA as reference, a HEI shall develop the following items which will be submitted to CHED when they apply for a permit for a new program or the approval of the transformation of existing programs to outcomes-based framework:

- The complete set of **Program Outcomes**, including its proposed additional program outcomes.
- Its proposed curriculum, and its justification including **Curriculum Map.**

Compliance of HEIs (Section IV of CHED AO 01.s. 2014)

Using the CHED Implementation Handbook for OBE and ISA as reference, a HEI shall develop the following items which will be submitted to CHED when they apply for a permit for a new program or the approval of the transformation of existing programs to outcomes-based framework:

- Proposed **Performance Indicators** for each outcome. Proposed measurement system for the level of attainment of each indicator.
- Proposed **Outcomes-Based Syllabus** for each course. This should already be indicative of the plan of **Delivery** of the curriculum, student assessment and of the resources to be deployed.

Compliance of HEIs (Section IV of CHED AO 01.s. 2014)

Using the CHED Implementation Handbook for OBE and ISA as reference, a HEI shall develop the following items which will be submitted to CHED when they apply for a permit for a new program or the approval of the transformation of existing programs to outcomes-based framework:

- Proposed system of program

Assessment And Evaluation

- Proposed system of program

Continuous Quality Improvement (CQI)

Compliance of HEIs (Section IV of CHED AO 01.s. 2014)

- The complete set of **Program Outcomes**, including its proposed additional program outcomes.
- Its proposed curriculum, and its justification including **Curriculum Map.**
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- Proposed **Outcomes-Based Syllabus** for each course. This should already be indicative of the plan of **Delivery** of the curriculum, student assessment and of the resources to be deployed.
- Proposed system of program **Assessment And Evaluation**
- Proposed system of program **Continuous Quality Improvement (CQI)**

Republic of the Philippines
OFFICE OF THE PRESIDENT
COMMISSION ON HIGHER EDUCATION

MEMORANDUM FROM THE OVERSIGHT COMMISSIONER FOR MARITIM EDUCATION

TO : **ALL MARITIME HIGHER EDUCATION INSTITUTIONS RECOGNIZED TO OPERATE THE BSMT AND/OR BSMar PROGRAM/S FOR SY2015-2016**

SUBJECT : **IMPLEMENTATION OF THE REVISED CURRICULUM AS PER CMO No. 20, SERIES OF 2015**

DTAE : **July 22, 2015**

Pursuant to CHED Memorandum Order No. 20, series of 2015 specifically Sectio which provides that "...any proposed revision made by MHEIs to its curriculum be submitted to the CHED for approval...", all MHEIs are required to submit revised curriculum and syllabi detailing the changes made and the catch up plan the affected students.

The approval of your institutions' curriculum is a requirement to ensure that students for SY2015-2016 are able to meet the prescribed standards of the STCW as amended by the time they graduate in 2019 and all other students in different levels.

In view of this, you are hereby reminded and enjoined to submit the rev curriculum and syllabi detailing the changes made and the catch up plan for affected students to CHED Central Office, Maritime Education Section on or be 07 August 2015.

Please download the submission templates at https://sites.google.com/site/maritimeedp

Thank you for your consideration and compliance.

MARIA CYNTHIA ROSE B. BAUTISTA
Oversight Commissioner for Maritime Education

Standard Template of Submissions for MHEIs

Paper Size: A4

Font: Arial

Font Size: 12

Spacing: Single space

Orientation: Landscape

Margin: 1" (left, right, top and bottom)

Minimum Syllabus requirements: Course Code, Course Name, Course Description, Course Outcomes, STCW Competence, STCW KUP, Performance/ILO, TLA, Assessment, Timetable

The curriculum should include the 4 year program of study

-Course should be guided by tabs

-3-Ring binder by year level, by course program (BSMT or BSMarE)

Prepare 2 sets (1 for CHED and 1 as receiving copy – to be returned to MHEI once approved)

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

..\Handbook on Typology Outcomes(1).pdf

Paradigm shift

Traditional Education → outcomes-based education

Basic concepts of outcomes-based education

Which do we use?

- Outcomes-based education?
- Outcomes based education?
- Outcome-based education?
- Outcome based education?
- OBE?
- OBTL?

Ref: Biggs, John and Tang, Catherine (2007*). Teaching for Quality Learning at University, 3rd* edition.Berkshire , England. Open University Press Mc Graw Hill

OBE Version One : Outcome-Based Education

- "Outcome-based education"- proposed by William Spady in 1994 as an **individualized programme** for disadvantaged school students
- Instead of teaching the standard disciplines, **targets for each student** to reach were set up so that all could achieve some sort of success.

Ref: Biggs, John and Tang, Catherine (2007*). Teaching for Quality Learning at University, 3rd* edition.Berkshire , England. Open University Press Mc Graw Hill

OBE Version Two

- This version came from the accountability movement in the USA (Ewell, 1984; Miller and Ewell, 2005)
- The **‘outcomes’ are at the institutional level**, comprising averaged student performances and other kinds of institutional outcomes

Ref: Biggs, John and Tang, Catherine (2007*). Teaching for Quality Learning at University, 3rd* edition.Berkshire , England. Open University Press Mc Graw Hill

OBE Version Three:
Outcomes-Based Teaching and Learning (OBTL)

- Introduced in the Dearing Report (1997)
- Outcomes are defined specifically to enhance teaching and assessment

Ref: Biggs, John and Tang, Catherine (2007*). Teaching for Quality Learning at University, 3rd* edition.Berkshire , England. Open University Press Mc Graw Hill

Which do we use?

- Outcomes-based education?
- Outcomes based education?
- Outcome-based education?
- Outcome based education?
- OBE?
- OBTL?

Ref: Biggs, John and Tang, Catherine (2007*). Teaching for Quality Learning at University, 3rd* edition.Berkshire , England. Open University Press Mc Graw Hill

- **<u>Outcome-based</u>**: used by Spady at school level
- **<u>Outcomes-based</u>**: for tertiary
- **<u>OBE</u>**: concerned with institutional level outcomes
- **<u>OBTL</u>**: classroom level OBE that addresses teaching and learning

Ref: Biggs, John and Tang, Catherine (2007*). Teaching for Quality Learning at University, 3rd* edition.Berkshire , England. Open University Press Mc Graw Hill

Outcomes-Based Education

- as strategy to achieve long term objectives of HEI for its graduates.

OUTCOMES-BASED TEACHING AND LEARNING (OBTL)

- Applied at the classroom level
- In support of outcomes-based education
- As a strategy to promote academic excellence

OBE Framework (CHED Handbook on Typology, OBE and ISA, 2014)

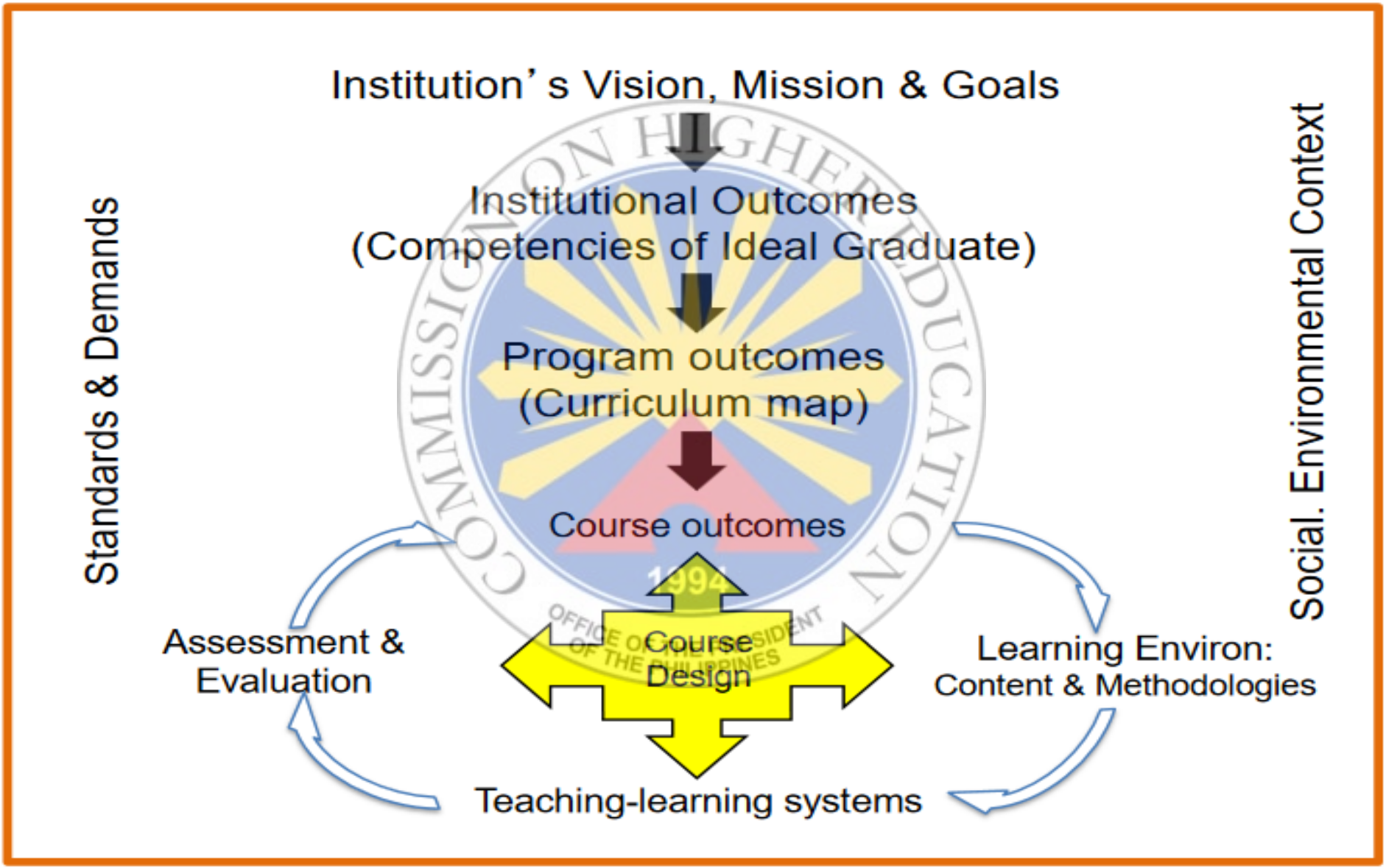
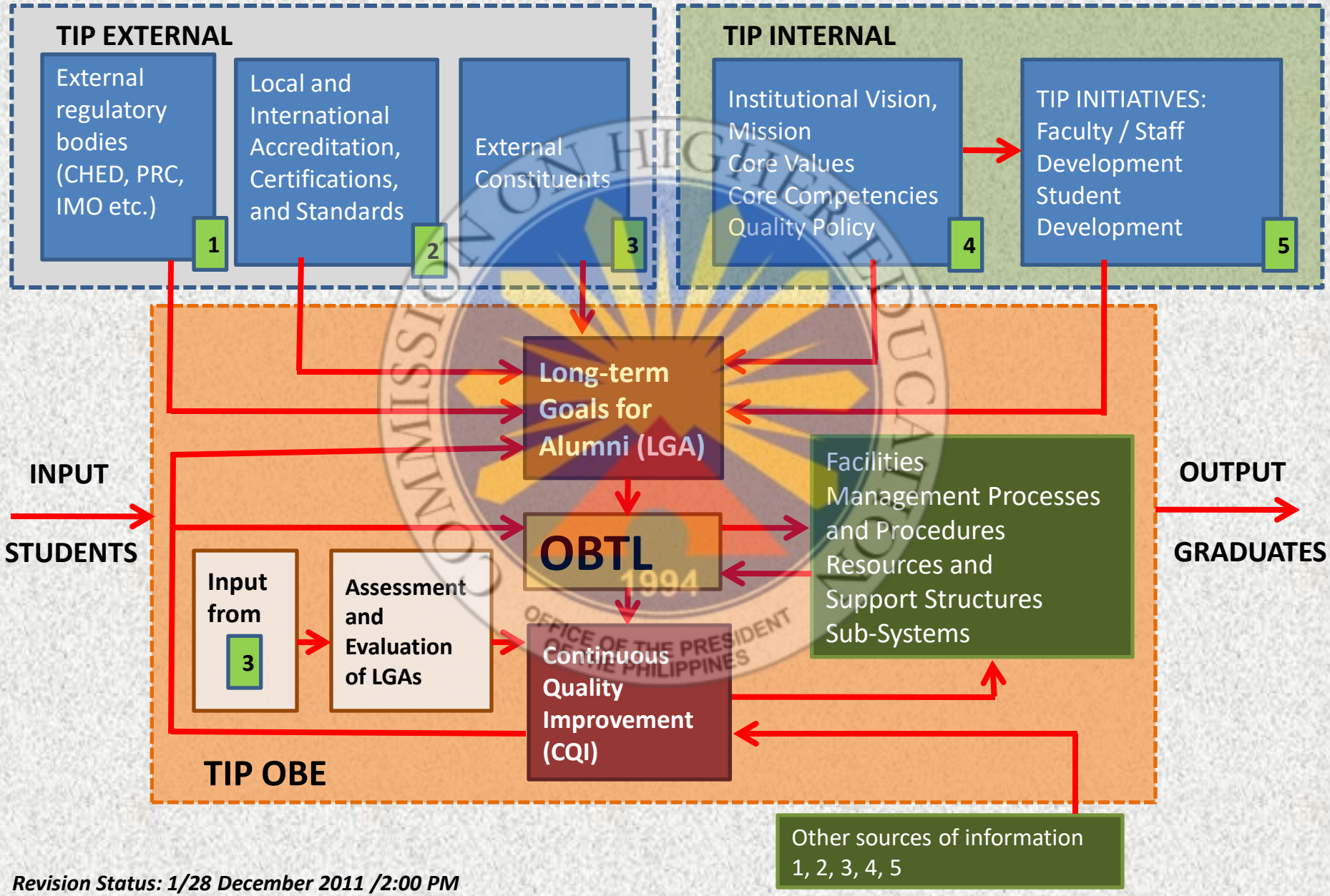


Figure 3. Framework for Outcomes-based Education

CHED OBE-MF-02.xlsx

Sample TIP Outcomes-Based Education Framework



Revision Status: 1/28 December 2011 /2:00 PM

2010 TIP BENCHMARKING VISIT ON OBTL AT CITY UNIVERSITY OF HONG KONG


TIP
TIP 50
1962-2012
International Conference on Outcomes-Based Teaching and Learning 2012
(ICOBTL 2012)
February 16-17, 2012
COMMISSION ON HIGHER EDUCATION
1994
OFFICE OF THE PRESIDENT OF THE PHILIPPINES

2012 INTERNATIONAL CONFERENCE ON OBTL WITH JOHN BIGGS AND CATHERINE TANG

2014 BENCHMARKING VISIT ON OUTCOMES-BASED ASSESSMENT AT CITY UNIVERSITY OF HONG KONG

2014 BENCHMARKING VISIT ON OUTCOMES-BASED ASSESSMENT AT THE UNIVERSITY OF MELBOURNE

2014 BENCHMARKING VISIT ON OUTCOMES-BASED ASSESSMENT AT MONASH UNIVERSITY

2014 BENCHMARKING VISIT ON OUTCOMES-BASED ASSESSMENT AT ENGINEERS AUSTRALIA

2014 BENCHMARKING VISIT ON OUTCOMES-BASED ASSESSMENT AT UNIVERSITY OF SYDNEY

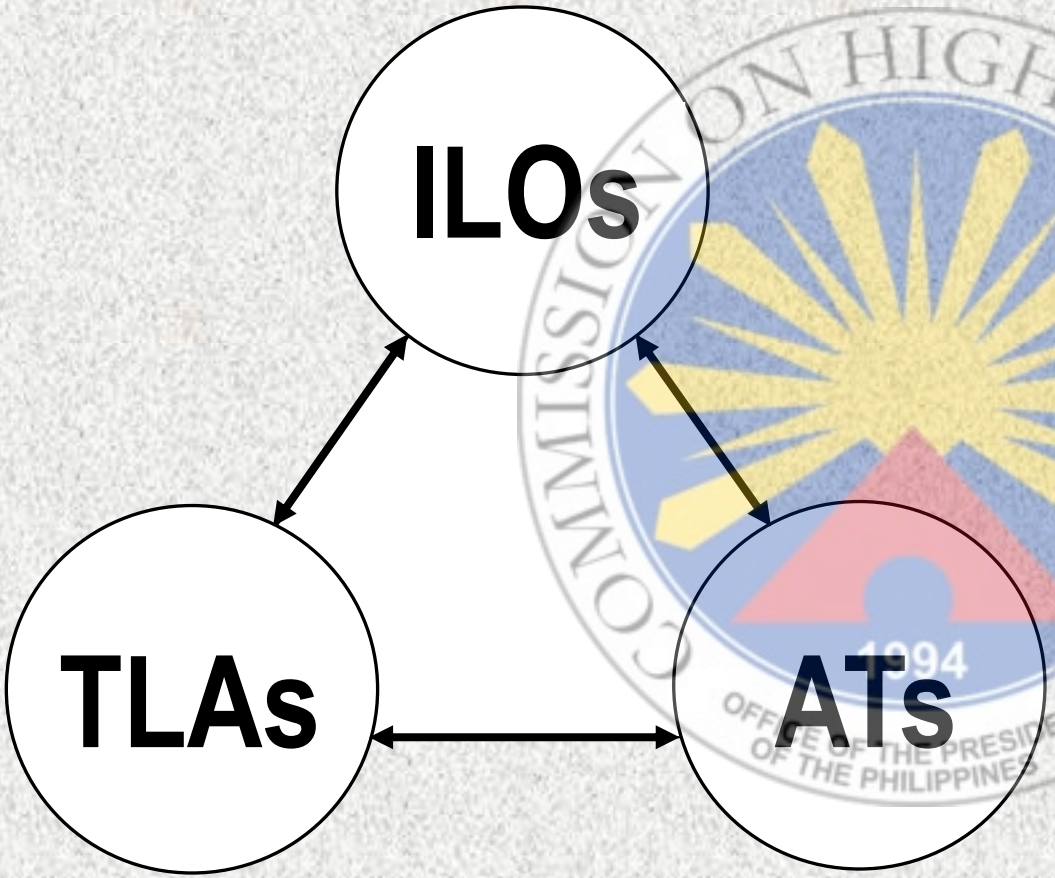
2014 BENCHMARKING VISIT ON OUTCOMES-BASED ASSESSMENT AT AUSTRALIA CENTER OF EDUCATIONAL RESEARCH

External Validation of T.I.P.'s OBE

ABET Accreditation of 14 Engineering Programs and 6 Computing Programs

Seoul Accredation of 6 Computing Programs

The OBTL Framework*

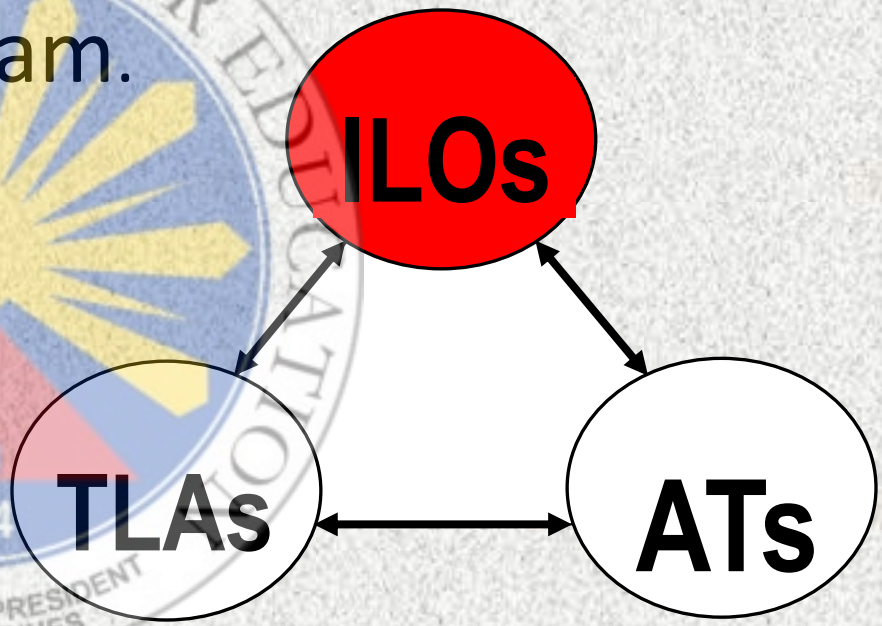


- Intended Learning Outcomes (ILOs)
- Teaching and Learning Activities (TLAs)
- Assessment Tasks (ATs)

*City University of Hong Kong

Intended Learning Outcomes (ILOs)

- ILOs describe what the learners will be able to do when they have completed their course or program.



Biggs,J and Tang, C. (2007). Teaching for quality learning at University, 3rd edition.Mc.Graw Hill

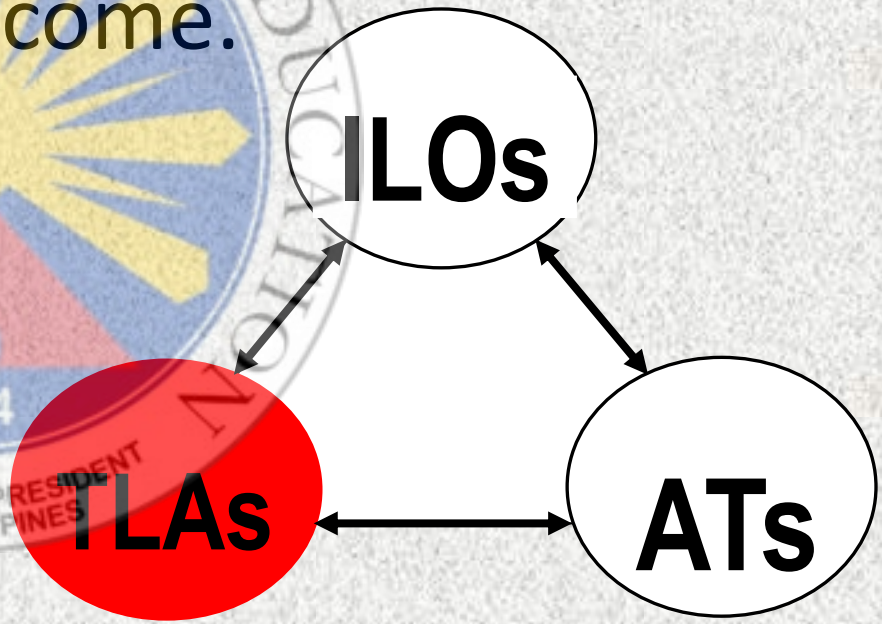
Intended Learning Outcomes (ILOs)

- These are statements , **written from the students' perspective**, indicating the level of understanding and performance they are expected to achieve as a result of engaging in teaching and learning experience

Biggs,J and Tang, C. (2007). Teaching for quality learning at University, 3rd edition.Mc.Graw Hill

Teaching and Learning Activity (TLA)

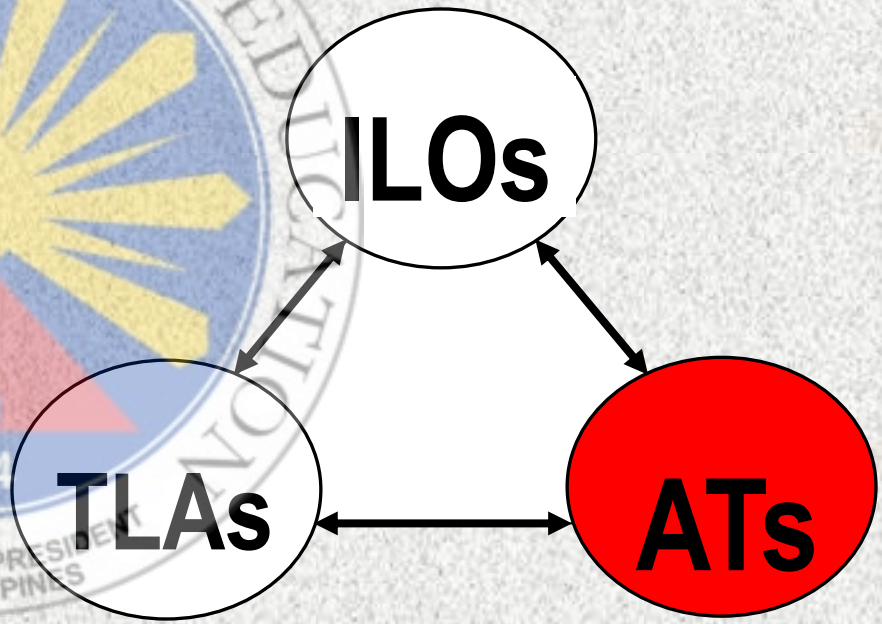
- Any activity which **stimulates, encourages or facilitates learning** of one or more intended learning outcome.



Biggs,J and Tang, C. (2007). Teaching for quality learning at University, 3rd edition.Mc.Graw Hill

Assessment Task (AT)

Assessment can be any method of assessing how well a set of ILO has been achieved



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What are the benefits of OBTL?

OBTL promises a high level of learning for all students as it facilitates the achievement of the outcomes, characterized by its appropriateness to individual learner's development level and active and experience-based learning

Source: University of Hong Kong OBTL Materials

How do we implement OBE/OBTL?

Begin with the end in view

"What kind of Graduates do we want to produce?"

Formulation of

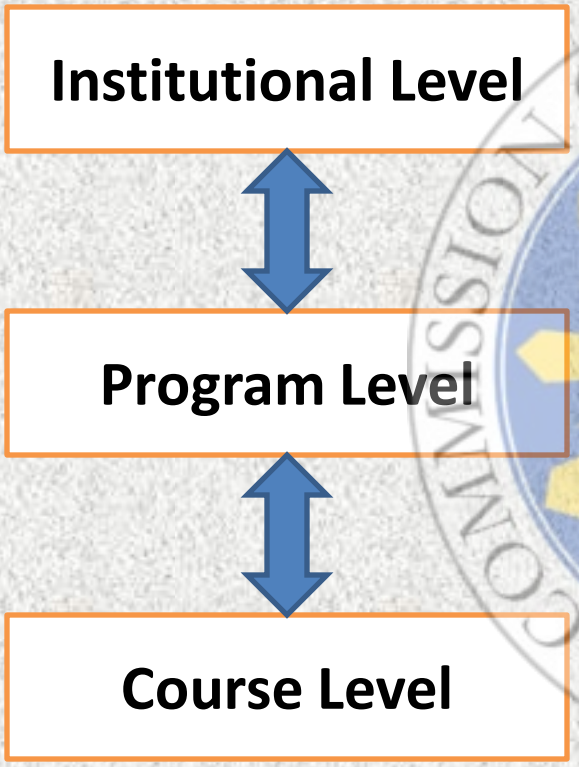
Intended Learning Outcomes (ILOs)

at three Levels:

1. Institutional Level
2. Program Level
3. Course Level

Biggs, J. and Tang, C. (2007). Teaching for quality learning at University, 3rd edition. McGraw Hill

Intended Learning Outcomes (ILOs) at three levels:



The ***institutional level***, as a statement of what graduates of the institution are supposed to be able to do

The ***degree program level***, as a statement of what graduates from a particular degree program should be able to do

The ***course level*** , as a statement of what students should be able to do at the completion of a given course.

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Institutional Level

- Institutional Intended Learning Outcomes
- Graduate attributes

…….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….. (CHED Handbook on Typology, OBE and ISA, 2014)

Sample:

TIP Graduate Attributes
Institutional Intended Learning Outcomes (IILOs)

Graduate Attributes	Intended Learning Outcomes
Professional Competence	**Demonstrate** understanding and mastery of the fundamental knowledge and skills required for effective professional practice in the field of specialization.
Critical Thinking and Problem Solving Skills	**Exercise** critical and creative thinking in providing solutions to discipline-related problems.
Communication Skills	**Apply** effective communication skills, both orally and in writing, using the English language.
Lifelong Learning	**Utilize** lifelong learning skills in pursuit of personal development and excellence in professional practice
Social and Ethical Responsibility	**Hold** personal values and beliefs as ethical professional consistent with Filipino family values, industry-desired values and global citizen values.
Productivity	**Contribute** to nation-building and national development through application of new technology
Interpersonal Skills	**Work** effectively in multi-disciplinary and multicultural teams

Intended Learning Outcomes (ILOs) at three levels:

The ***institutional level***, as a statement of what graduates of the institution are supposed to be able to do

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Program Level

- Program Educational Objectives (PEOs)
- Student Outcomes (SOs)/Program Outcomes (POs)

Program Level

Program Educational Objectives

Program educational objectives are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve within 3 to 5 years of graduation.

Program Educational Objectives are based on the needs of the program's constituencies.

(CMO No. 37 s. 2012. Policies, standards and guidelines in the establishment of an outcomes-based education(OBE) system in higher education institutions offering engineering programs)

Sample PEO:

TIP Program Educational Objectives of the EE Program

Three to five years after graduation, the TIP Electrical Engineering alumni shall

- have advanced their practice or achievement in the field of Electrical Engineering and/or other endeavors or advocacies supported by their acquired engineering education;
- strive to be globally competitive through
  - living by TIP's mission values, pursuing continuing education, and practicing continuous quality improvement (CQI) in their personal lives;
  - Continuously scanning, adopting and building on the best practices in their field.

Program Level

Student Outcomes/ Program

Outcomes specify what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that students acquire as they go through the program.

(CMO No. 37 s. 2012. Policies, standards and guidelines in the establishment of an outcomes-based education(OBE) system in higher education institutions offering engineering programs)

(CHED Handbook on Typology, OBE and ISA, 2014)

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.

Alignment of student outcomes/program with the external and internal competency requirements

Example: <u>Engineering Programs</u>

- CHED prescribed competencies
- ABET student outcomes
- Washington accord graduate attributes
- PTC student outcomes
- Institutional prescribed graduate attributes

Alignment of student outcomes/program outcomes with external and internal competency requirements

Example: <u>Education Programs</u>

- CHED prescribed competencies
- National Competency Based Teacher Standards (NCBTS)
- Teaching Competency Standard in Southeast Asian Countries – SEAMEO INNOTECH
- Institutional prescribed graduate attributes

Required Minimum Set of **Program Outcomes**

(as per CHED Administrative Order No. 01 Series 0f 2014)

1. Common to all programs in all types of schools
2. Common to a discipline (such as Engineering, Business, Health Sciences, etc.) to be formulated by the technical panels
3. Specific to a sub-discipline and a major (such as mechanical engineering, entrepreneurship, nursing, etc) to be formulated by the technical committees
4. Common to a horizontal type as defined in CMO 46 s. 2012
5. Optional program outcomes

Required Minimum Set of **Program Outcomes**

(as per CHED Administrative Order No. 01 Series 0f 2014)

Common to all programs in all types of schools

The graduates have the ability to

a) Articulate and discuss the latest developments in the specific field of practice (PQF level 6 descriptor)

b) Effectively communicate orally and in writing using both English and Filipino

c) Work effectively and independently in multi-disciplinary and multi-cultural teams (PQF level 6 descriptor)

d) Act in recognition of professional, social, and ethical responsibility

e) Preserve and promote "Filipino historical and cultural heritage"(based on RA 7722)

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- 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

5. Optional program outcomes

Required Minimum Set of **Program Outcomes**

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4. Common to a horizontal type as defined in CMO 46 s. 2012

5. Optional program outcomes

The PSGs shall allow a HEI, at its option, to have mission-related program outcomes that are not included in the minimum set.

Required Minimum Set of **Program Outcomes**

(as per CHED Administrative Order No. 01 Series 0f 2014)

….for State Universities and Colleges, graduates must have the competencies to support **“ national , regional and local development plans”**

Sample SOs/POs: Electrical Engineering

By the time of graduation, EE students will be able to:

- apply knowledge of mathematics, science, and engineering to solve complex engineering problems;
- identify, formulate, and solve complex engineering problems;
- solve complex engineering problems by designing systems, components, or processes to meet specifications within realistic constraints such as economic, environmental, cultural, social, societal, political, ethical, health and safety, manufacturability, and sustainability in accordance with standards;
- design and conduct experiments, as well as to analyze, and interpret data, and synthesize information to provide valid conclusions for investigating complex problems;
- use the techniques, skills, and modern engineering tools necessary for engineering practice in complex engineering activities;
- apply knowledge of contemporary issues and the consequent responsibilities relevant to professional engineering practice;
- understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development;
- apply principles of ethics and commit to professional ethics and responsibilities;
- function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings;
- communicate effectively on complex engineering activities with various communities including engineering experts and society at large using appropriate levels of discourse ;
- demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments;
- recognize the need for, and prepare to engage in lifelong learning.

Example of Program Outcomes

CHED OBE-MF-01.xlsx

Curriculum Mapping

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.

(CHED Handbook on Typology, OBE and ISA, 2014)

Examples of Curriculum Map

CHED OBE-MF-01.xlsx

(CHED Handbook on Typology, OBE and ISA, 2014)

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.

Mapping of the Curriculum with the Student Outcomes (CE Program)

Professional Courses	Units	a	b	c	d	e	f	g	h	i	j	k	l
Elementary Surveying	3	D	D	I				I	D	D		D	
Higher Surveying	3	D	D	I		D		I	D	D		D	
Engineering Surveys	4	D	D	I		D		I	D	D		D	
Building Design 1	2	E	E	I		D		I	D	D	D	D	
Building Design 2	2	E	E	I		D		I	D	D	D	D	
CE Projects 1	3		D	D		D			D	D	D	D	D
CE Projects 2	3		D	D		D			D	D	D	D	D
Adv. Engig Math with Numerical Methods	3	D	D	I		D		I					
Highway Engineering	3	D	D	D		E		I	D				
Soil Mechanics	4	D	D	I	E	D		I	D	D	D	D	
Fluid Mechanics	4	D	D	E	E				D				
Structural Theory 1	4	D	D	I		E			D				
Transportation Engineering	3	D	D	D					D				
Structural Theory 2	4	D	D	I		E			D				
Hydrology	3	D	D	D				I	D				
Hydraulics Engineering	4	D	D	D	E				D				
Timber Design	3	D	D	D		D		I	D				
Reinforced Concrete Design	6	D	D	D		D		I	D				
Water Resources Engineering	3	D	D	D		D		I	D				
Foundation Design	4	D	D	I	E			I	D	D	D		
Structural Steel Design	4	D	D	D		D		I	D				
Construction Materials and Testing	3	E	E	E	E	I		I	D	D	D		
Construction Methods and Project Management	4	I	E	D			D		D	D	D		D
CE Laws, Ethics, Codes and Standards	3		E	D			D		D	D	D		D
Earthquake Engineering	3	D	D	I		D		I	D				D
Water and Waste Water Engineering	3	D	D	I		D		I	D				
Structural Matrix Analysis	3	D	D	I		D		I	D				
Prestressed Concrete Design	3	D	D	D		D		I	D				
On-the-job Training for CE	5	D	I	I						E	I	D	
Plant Visits and Seminars for CE	1	E								E			
Integration Course for CE 1	2	E											D
Integration Course for CE 2	2	E											D
Integration Course for CE 3	2	E											D
Linear Algebra with MATLAB	3	E				D							

Intended Learning Outcomes (ILOs) at three levels:

The ***institutional level***, as a statement of what graduates of the institution are supposed to be able to do

The ***degree program level***, as a statement of what graduates from a particular degree program should be able to do

The ***course level*** , as a statement of what students should be able to do at the completion of a given course.

Biggs,J and Tang, C.(2007). Teaching for quality learning at University, 3rd edition.McGraw Hill

Course Level

Revision of all Course Syllabi to incorporate ***Course Intended Learning Outcomes (CILOs)***

- What the students can do when they have completed the course/subject

Ex. Algebra, Communication Arts, etc.

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Ex. Algebra, Communication Arts, etc.

<u>Course Level</u> – Course Intended Learning Outcomes

Note: The course intended learning outcome is a very important component in OBTL implementation that every faculty member should be able to recognize

Sample TIP Syllabus

COURSE CODE	EE 003
COURSE NAME	ELECTRICAL CIRCUITS 2
CREDITS	4 units (3 units lecture, 1 unit laboratory)
CONTACT HOURS	3 hours lecture, 3 hours laboratory
INSTRUCTOR	Bryan B. Navarro Faculty Member, Electrical Engineering
TEXTBOOK	Irwin, D. (2011). *Engineering circuit analysis (10th ed.)* Asia: John Wiley and Son.
Other Supplemental Materials	Dorf, R.(2011). *Introduction to electric circuits (8th ed.)* New Jersey: John Wiley and Sons. Nilsson, J.(2011). *Electric circuits (9th ed.)* Boston: Prentice Hall. Bird, J.(2010). *Electrical circuit theory and technology (4th ed.)* Massachusetts: Elsevier. Gussow, M. (2010). *Schaums outline series of basic electricity*. Tata Mc Graw-Hill New York: Graw- Hill. Singh, R. (2009). *Electrical networks* New York: Tata McGraw-Hill.

SPECIFIC COURSE INFORMATION

a. Course Description

The course introduces the concept of instantaneous electric circuits. It provides the knowledge and principles of AC circuits involving analysis of RLC circuits applied with sinusoidal voltage; complex impedance, bridge circuits; analysis of complex circuits connected with different load impedance; concept of power and power factor correction through power triangle relationship; resonant and tuned circuits, two-port network parameters and transfer function and analysis of dynamic circuits with AC excitation, basic principles of coupled circuits. The students are expected to demonstrate the knowledge and principles of electric circuits in solving complex problem in electrical systems.

b. Prerequisites **Co-requisites**	EE 002 (Electrical Circuits 1) MATH 011 (Advanced Engineering Mathematics)
c. Course Classification (Required/elective/ Selected elective)	Required

Sample TIP Syllabus (continuation)

SPECIFIC GOALS FOR THE COURSE

a. Course Objective

The course aims to provide knowledge and principles to students to enhance their critical thinking skills in solving complex AC system through the principles of circuit analysis involving inductive, capacitive and resistive load. The course also aims to characterize, evaluate and compare the output response both in the time and frequency domain relative to the passive elements (resistance, capacitance and inductance) impressed with sinusoidal voltage, to verify the behavior of ac system at with and without static capacitor; analyze ac system under transient current condition, principles of AC bridge circuits and application, Principles of Harmonics and Filters, and analysis of ac system involving Maximum Power Transfer.

b. Course Outcomes

By the end of the course, the students will be able to:

1) ***Distinguish*** resistive, inductive and capacitive load circuits
2) ***Convert*** maximum values into root-mean squared values
3) ***Analyze*** ac circuits under condition of resonance frequency and during transient current
4) ***Use*** appropriate techniques in the analysis of ac circuits as applied with ac voltage
5) ***Evaluate*** the time response of series RL and RC circuits applied with ac voltage
6) ***Apply*** power factor correction in correcting power factor using power triangle method
7) ***Conceptualize*** ac bridge circuits as applied to ac system or equipment

c. Student Outcomes Addressed by the Course

a. apply knowledge of mathematics, science, and engineering to solve complex engineering problems

Sample TIP Syllabus (continuation)

COURSE TOPICS

Prelim Period (Weeks 1–6)

I. Introduction: Vision and Mission; TIP Graduate Attributes/ Institutional Intended Learning Outcomes; Program Educational Objectives/ Student Outcomes; Course Objectives/ Course Intended Learning Outcomes; Course Policies

II. Introduction to AC Electrical System and its Characteristics: Generation of Alternating Current; Average and RMS Values; RLC Circuits; Sum of Voltages with Classical Method; Impedance, and Phase Angle

III. Properties of AC Electric Circuits: Functional Transformation; Ohm's Law in AC Circuits; Phasor Voltage and Current; Impedance; Reactance; Succeptance; Parallel and Series Operation of Load Impedances

Midterm Period (Week 7-12)

IV. Linear Bilateral Circuits: Analysis of Multiple Sources; Complex Circuits Analysis involving Thevenin's and Norton's Theorems; Linear Bilateral Circuits involving Nodal Principles.

V. Power and Power Factor Analysis in Single-Phase and Three-Phase AC Circuits:; Power Triangle; Power Factor Correction; Power in Multiple Loads of Inductive, Resistive, and Capacitive Loads; Maximum Power Transfer

Final Period (Weeks 13–18)

VI. AC Circuits Involving Resonance and Tuned Circuits with Varying Frequency: Series and Parallel Resonance in AC Circuits; Bandwidth Frequency; Harmonics, and Harmonic Filters

VII. AC Transients, Over-voltage and Under-voltages and Analysis: Characteristics of AC Transients; Double Energy Transients; Effects of Transients in Electric Power System

Sample Course Syllabus

COURSE CODE **COURSE NAME**	**BIO 113** **BIOLOGICAL SCIENCE**
CREDITS **CONTACT HOURS**	3 units 54 hrs
INSTRUCTOR	Dr. Merle B. Lopez Faculty, College of Education
TEXTBOOK	Formacion, Minda J. et al. (2011)Fundamentals of Biology, Rex Book Store, Inc. , Quezon City
OTHER SUPPLEMENTAL MATERIALS	National Geographic (2013) Universal Magazine Exchange (UMX)

Sample Course Syllabus

SPECIFIC COURSE INFORMATION	
a. Course Description	
This course deals with the introduction to concepts in biology and can serve as a foundation of essential knowledge on living things with emphasis the study of structure and functions of the organ systems, with special references to vertebrates. It also covers the various functioning systems of the human body and related the practical applications of knowledge gained in everyday living.	
b. Prerequisites **Co-requisites**	None
c. Course Classification (Required/ elective/ selected elective)	Required

Sample Course Syllabus

SPECIFIC GOALS FOR THE COURSE

a. Course Objective

This course aims to cover brief introduction of biology and its different branches explaining the characteristics of life and the chemical foundations of life, the general structure of eukaryotic and prokaryotic cells related to synthesis of important biological compounds through synthesis and cellular respiration, illustration of human genetic pattern of inheritance leading to individual differences giving emphasis on the various functioning systems of the human body and its practical applications.

b. Course Outcomes

By the end of the course, the students will be able to:

1. ***discuss*** the importance of the different studies in Biology and the characteristics of life, including the chemical foundations of life;
2. ***differentiate*** prokaryotic and eukaryotic cells as to their structure and functions supporting the concept of photosynthesis and cellular respiration;
3. ***explain*** the process of cell division and the cell cycle;
4. ***design*** a new way in presenting multi-cellular organization of plants tissues as well as animal tissues and organs;
5. ***summarize*** the different organ systems and their general functions in animals; and
6. ***compare and contrast*** the different principles of inheritance, chromosomal and molecular basis of inheritance on human beings to support the individual differences, biologically and genetically.

Sample Course Syllabus

c. Student Outcomes Addressed by the Course

The following student outcomes will be addressed by the course.

1. Demonstrate high level literacy, communication, numeracy , critical and creative thinking, learning skills, and digital fluency needed for higher learning in the field/classroom (student outcome a);
2. Relate classroom activities to the experiences and aspirations of the learners in their homes and communities (student outcome f);
3. Recognize the need for, and prepare to engage in lifelong learning (student outcome h).

Sample Course Syllabus

Course Topics

Prelim Period (Weeks 1–6)

I. **Introduction**: TIP Vision and Mission; TIP Graduate Attributes/ Institutional Intended Learning Outcomes; Program Objectives/ Program Intended Learning Outcomes; Course Objectives/ Course Intended Learning Outcomes; Course Policies

II. **Introduction to Earth Science**: Definition, Characteristics of Living Things, Scientific Method, Theories and Principle

III. **Tissues**: Plant and Animal Tissues

Midterm Period (Weeks 7-12)

IV. **Organ Systems (Structure and Functions):** Plant organ Systems, Animal Organ Systems, Organ System for Support, Protection and Movement, Organ Systems for Nutrition, Organ System for Exchange of Gases, Organ System for Internal Support, The Immune System, Organ for Salt and Water Balance and Excretion, Neurons and Nervous System

Final Period (Weeks 13-17)

V. **Reproduction and Development:** Cell Division and Sexual Reproduction, Organismal reproduction and Development, Reproduction in Plants

VI. **Patterns of Heredity:** Mendelian Inheritance, Modification of Mendelian Inheritance

Final Exam (Week 18)

From **Objectives** to **Intended Learning Outcomes**

Objectives (old)	ILO (new)
1. To provide an understanding of the kinematics and kinetics of machines and the fundamental concepts of stress and strain analysis. 2. To develop an analytical understanding of the kinematics and kinetics and elastic behaviors of machine elements under loading	By the end of the course, the students should be able to: ***1.*** ***describe*** the basic principles of kinematics and kinetics of machines and the fundamental concepts of stress and strain analysis. 2. ***solve*** a mechanical problem that involves loading and motion. ***3.*** ***select*** relevant principles to obtain the solutions for mechanical problems ***4.*** ***present*** analyses and results of experiments in a proper format of a written report such that a technically qualified person can follow and obtain similar findings.

Ref: Biggs, John and Tang, Catherine (2011*). Teaching for Quality Learning at University, 4th* edition. Berkshire , England. Open University Press Mc Graw Hill

Writing the course intended learning outcomes (ILOs)

ILOs should be stated in such a way that they stipulate :

- The ***verb*** at the appropriate level of understanding or of performance intended
- the topic ***content*** the verb is meant to address
- The ***context*** of the content discipline in which the verb is to be deployed

Some action verbs from Bloom's revised taxonomy

Remembering	Define, describe, draw, find, identify, label, list, match, name, quote, recall, recite, tell, write
Understanding	Classify, compare, conclude, demonstrate, discuss, exemplify, explain, identify, illustrate, interpret, paraphrase, predict, report
Applying	Apply, change, choose, compute, dramatize, implement, interview, prepare, produce, role play, select, show, transfer, use
Analyzing	Analyze, characterize, classify, compare, contrast, debate, deconstruct, deduce, differentiate, discriminate, distinguish, examine, organize, outline, relate, research, separate, structure
Evaluating	Appraise, argue, assess, choose, conclude, critique, decide, evaluate, judge, justify, monitor, predict, prioritize, prove, rank, rate, select
Creating	Compose, construct, create, design, develop, generate, hypothesize, invent, make, perform, plan, produce

Ref: Biggs, John and Tang, Catherine (2011*). Teaching for Quality Learning at University, 4th* edition. Berkshire , England. Open University Press Mc Graw Hill

Constructive Alignment of ILO,TLA and AT

Constructive Alignment of ILO,TLA,AT

Course Intended Learning Outcomes (CILOs)	Teaching and Learning Activities (TLAs)	Assessment Tasks(ATs)	Grading Criteria
CILO #1. **Identify the importance of water for human activities and the water resources engineering**	Lecture Group Discussion	Essay Reflective Journal	Rubric for Reflection Paper/Essay

Constructive Alignment of ILO,TLA,AT

Course Intended Learning Outcomes (CILOs)	**Teaching and Learning Activities (TLAs)**	**Assessment Tasks(ATs)**	**Grading Criteria**
CILO #1. Identify the importance of water for human activities and the water resources engineering	Lecture Group Discussion	Essay Reflective Journal	Rubric for Reflection Paper/Essay

Constructive Alignment of ILO,TLA,AT

Course Intended Learning Outcomes (CILOs)	**Teaching and Learning Activities (TLAs)**	**Assessment Tasks(ATs)**	**Grading Criteria**
CILO #1. Identify the importance of water for human activities and the water resources engineering	Lecture Group Discussion	Essay Reflective Journal	Rubric for Reflection Paper/Essay

Constructive Alignment of ILO,TLA,AT

Course Intended Learning Outcomes (CILOs)	Teaching and Learning Activities (TLAs)	Assessment Tasks(ATs)	Grading Criteria
Explain the global hydrologic cycle	Film Showing Software and Simulation	Class Presentation	Rubric for Oral Presentation

Constructive Alignment of ILO,TLA,AT

Course Intended Learning Outcomes (CILOs)	Teaching and Learning Activities (TLAs)	Assessment Tasks(ATs)	Grading Criteria
Analyze rainfall and runoff data	Group Activity	Case Study	Rubric on Case Study

Outcomes-Based Assessment

-to measure the level of attainment of outcomes

Assessment of Outcomes

Assessment in OBE is the process of determining the degree of attainment of an outcome at the ***course level*** as well as at the ***program level***.

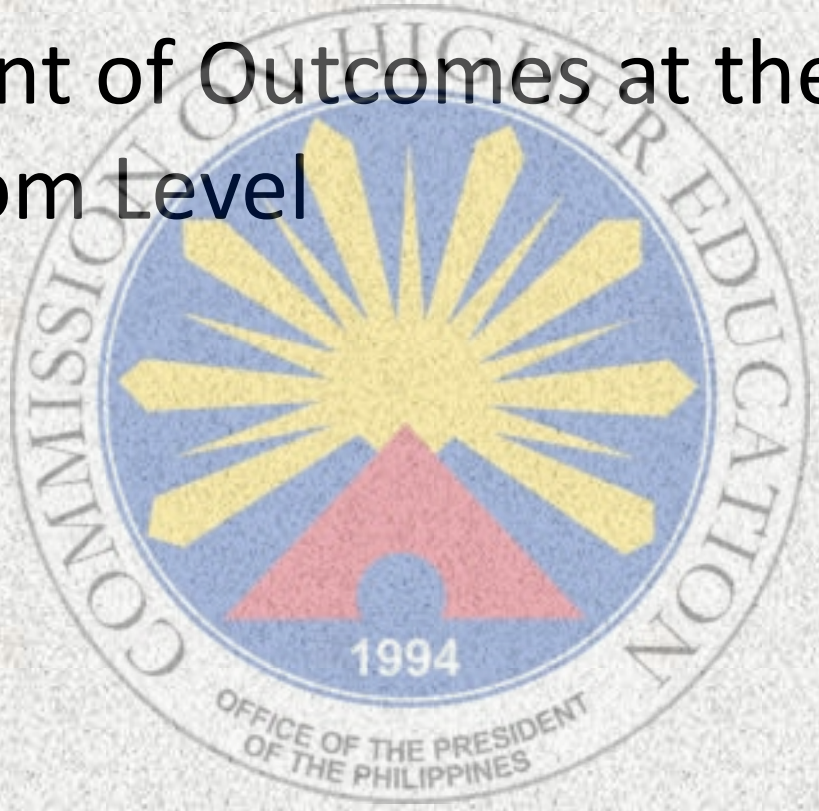
PROGRAM LEVEL

Example of Assessment for PEOs

- *Alumni Survey*
- *Employer Survey*

Assessment of Outcomes

Assessment of Outcomes at the Classroom Level



Assessment of Student Outcomes

- **Indirect Assessments**
  - Student Survey
  - Faculty Survey
  - Graduating Students Survey
- **Direct Assessments**
  - Using Rubrics

Direct Methods

Direct methods provide for the direct examination or observation of student knowledge or skills against measurable performance indicators.

Indirect Methods

Indirect assessment of student learning ascertain the opinion or self-report of the extent or values of learning experiences.

Assessment Methods

Direct

- Student assignments
- Locally developed exams
- National exams
- Student portfolios

Indirect

- Surveys and questionnaires
- Focus groups
- Advisory board recommendations, polls, exercises
- Exit interview

Instruments Used for the Direct Assessments of Student Outcomes

1. Rubric for SO (a) Engineering Knowledge
2. Rubric for SO (b) Problem Analysis
3. Rubric for SO (c) Multiple Constraints
4. 4.a. Rubric for SO (d1) Conduct of Laboratory Experiments
   4.b. Rubric for SO (d2) Final Laboratory Project
5. Rubric for SO (e) Modern Tool Usage
6. Rubric for SO (f) Contemporary Issues
7. Rubric for SO (g) Environment and Sustainability
8. Rubric for SO (h) Ethics
9. Rubric for SO (i) Individual and Team Work
10. Rubric for SO (j) Effective Communication
11. Rubric for SO (k) Project Management and Finance
12. Rubric for SO (l) Lifelong Learning

Sample

RUBRIC FOR ENGINEERING KNOWLEDGE

Student Outcome (a): Apply knowledge of mathematics, science, and engineering to solve complex engineering problems.

Performance Indicators	Unsatisfactory 1	Satisfactory 2	Exemplary 3	Score
1. Choose the appropriate mathematical, science, and engineering principles in solving problems in engineering.	The student does not know any mathematical, science, and engineering principle that can be used to solve a given engineering problem.	The student can identify but fails to apply an appropriate mathematical, science, and engineering principle to solve an engineering problem.	The student correctly applies an appropriate mathematical, science, and engineering principle to solve an engineering problem.	
1. Examine different approaches in solving problems in engineering and choose the most effective approach.	The student uses a wrong approach in solving problems in engineering.	The student can solve the problem using a single approach.	The student is able to solve the problem correctly using multiple approaches.	
1. Apply the appropriate mathematical, science, and engineering principles to arrive at a solution.	The student cannot solve a given engineering problem.	The student applies mathematical, science, and engineering principle but does not arrive at the correct answer.	The student applies the correct mathematical, science, and engineering principle to solve the problem and arrives at the correct answer.	
			Total Score	
			Mean Score = (Total Score / 3)	
			Percentage Rating = (Total Score / 9) x 100%	

Sample Action Plan for Direct Assessment of Student Outcomes

Student Outcomes		Direct Assessment Method	Assessment Tool	Source of Assessment	Time of Data Collection	Responsibility
d	Design and conduct experiments, as well as to analyze, and interpret data, and synthesize information to provide valid conclusions for investigating complex problems.	Laboratory Exercises	Rubric for Conduct of Experiments SO (d1)	Feedback and Control Systems Electronic Circuit Analysis and Design	September 2012	• Chair • Laboratory Instructor • Faculty SO Assessment Committee
		Final Laboratory Project	Rubric for Final Laboratory Project SO (d2)	Feedback and Control Systems Electronic Circuit Analysis and Design		
e	Use the techniques, skills, and modern engineering tools necessary for engineering practice in complex engineering activities.	On-the-Job Training	Rubric for Modern Tool Usage SO (e)	ECE Practicum Industrial Electronics	September 2012 February 2013	• Chair • OJT Coordinator • Faculty SO Assessment Committee
f	Apply knowledge of contemporary issues and the consequent responsibilities relevant to professional engineering practice.	Locally developed examination	Rubric for Contemporary Issues SO (f)	Project Study ECE Laws, Contracts and Ethics	September 2012	• Chair • Faculty SO Assessment Committee
g.	Understand the impact of professional engineering solutions in socp ietal and environmental contexts, demonstrate knowledge of, and need for sustainable development.	Locally developed examination	Rubric for Environment and Sustainability	Project Study Thesis 1	September 2012	• Chair • Faculty SO Assessment Committee

Sample Action Plan for Direct Assessment of Student Outcomes

Student Outcomes		Direct Assessment Method	Assessment Tool	Source of Assessment	Time of Data Collection	Responsibility
h.	Apply principles of ethics and commit to professional ethics and responsibilities.	Culminating Design Project	Rubric for Ethics SO (h)	Communication Systems Design Project Study	September 2012	• Chair • Project Design Instructor • Faculty SO Assessment Committee
i.	Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary setting.	Group Project	Rubric for Individual and Team Work SO (i)	Communication Systems Design Transmission Media and Antenna Systems	September 2012	• Chair • Faculty SO Assessment Committee
j.	Communicate effectively on complex engineering activities with various communities including engineering experts and society at large using appropriate levels of discourse.	Culminating Design Project Oral and Written Report	Rubric for Effective Communication SO (j)	Project Study Seminars and Field Trips	September 2012	• Chair • Project Design Instructor • Faculty SO Assessment Committee

Sample Action Plan for Direct Assessment of Student Outcomes

	Student Outcomes	Direct Assessment Method	Assessment Tool	Source of Assessment	Time of Data Collection	Responsibility
k.	Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	Group Project	Rubric for Project Management SO (k)	Communication Systems Design Thesis 1	Sep 2012	• Chair • Faculty SO Assessment Committee
l.	Recognize the need for, and prepare to engage in lifelong learning.	On-the-Job Training	Rubric for Lifelong Learning	ECE Practicum EC 522	Sep 2012	• Chair • OJT Coordinator • Faculty SO Assessment Committee

Sample

Assessment Cycle for 2012-2018

	Student Outcomes	2012	2013	2014	2015	2016	2017	2018
a.	apply knowledge of mathematics, science, and engineering to solve complex engineering problems	● □ ♦	●♦		□♦	●♦		□♦
b.	identify, formulate, and solve complex engineering problems	● □ ♦	●♦		□♦	●♦		□♦
c.	solve complex engineering problems by designing systems, components, or processes to meet specifications within realistic constraints such as economic, environmental, cultural, social, societal, political, ethical, health and safety, manufacturability, and sustainability in accordance with standards	● □ ♦	●♦		□♦	●♦		□♦

Legend:

□ Survey for Graduating Students

● Students and Faculty Survey

♦ Direct Assessment

Sample

Assessment Cycle for 2012-2018

Student Outcomes		2012	2013	2014	2015	2016	2017	2018
d.	design and conduct experiments, as well as to analyze, and interpret data, and synthesize information to provide valid conclusions for investigating complex problems	● □ ♦		●♦	□♦		●♦	□♦
e.	use the techniques, skills, and modern engineering tools necessary for engineering practice in complex engineering activities	● □ ♦	●♦		□♦	●♦		□♦
f.	apply knowledge of contemporary issues and the consequent responsibilities relevant to professional engineering practice	● □ ♦		●♦	□♦		●♦	□♦

Legend:

□ Survey for Graduating Students

● Students and Faculty Survey

♦ Direct Assessment

Sample

Assessment Cycle for 2012-2018

Student Outcomes		2012	2013	2014	2015	2016	2017	2018
g.	understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development	● □ ♦		●♦	□♦		●♦	□♦
h.	apply principles of ethics and commit to professional ethics and responsibilities	● □ ♦		●♦	□♦		●♦	□♦
i.	function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings	● □ ♦			● □♦			● □♦

Legend:

□ Survey for Graduating Students

● Students and Faculty Survey

♦ Direct Assessment

Assessment Cycle for 2012-2018

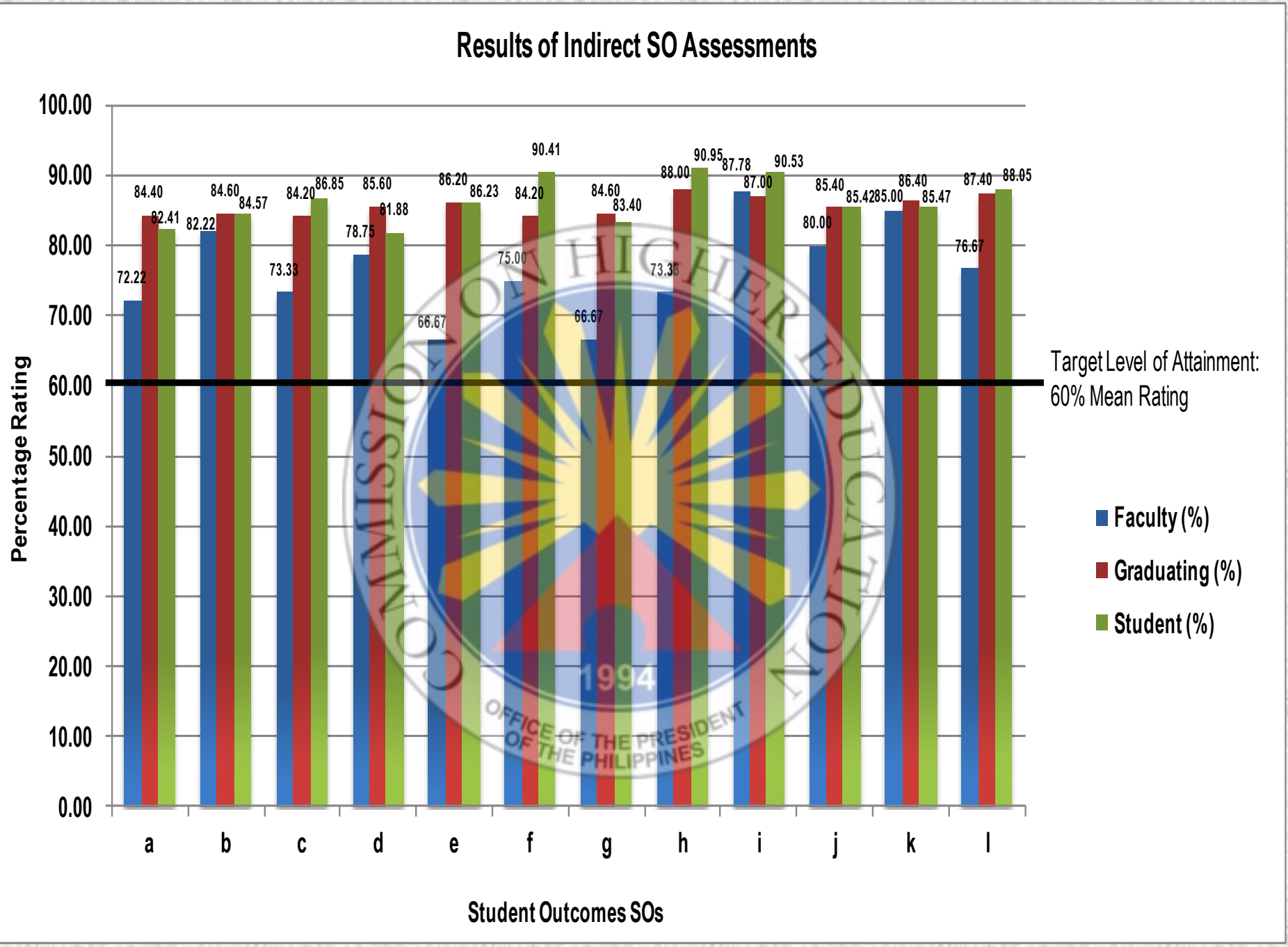
Student Outcomes		2012	2013	2014	2015	2016	2017	2018
j.	communicate effectively on complex engineering activities with various communities including engineering experts and society at large using appropriate levels of discourse	● □ ♦			● □♦			● □♦
k.	demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments	● □ ♦			● □♦			● □♦
l.	recognize the need for, and prepare to engage in lifelong learning	● □ ♦			● □♦			● □♦

Legend:

□ Survey for Graduating Students

● Students and Faculty Survey

♦ Direct Assessment


Results of Indirect SO Assessments
Percentage Rating
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
72.22
84.40
82.41
82.22
84.60
84.57
73.33
84.20
86.85
78.75
85.60
81.88
66.67
86.20
86.23
75.00
84.20
90.41
66.67
84.60
83.40
73.33
88.00
90.95
87.78
87.00
90.53
80.00
85.40
85.42
85.00
86.40
85.47
76.67
87.40
88.05
a
b
c
d
e
f
g
h
i
j
k
l
Student Outcomes SOs
Target Level of Attainment:
60% Mean Rating
Faculty (%)
Graduating (%)
Student (%)

TECHNOLOGICAL INSTITUTE OF THE PHILIPPINES

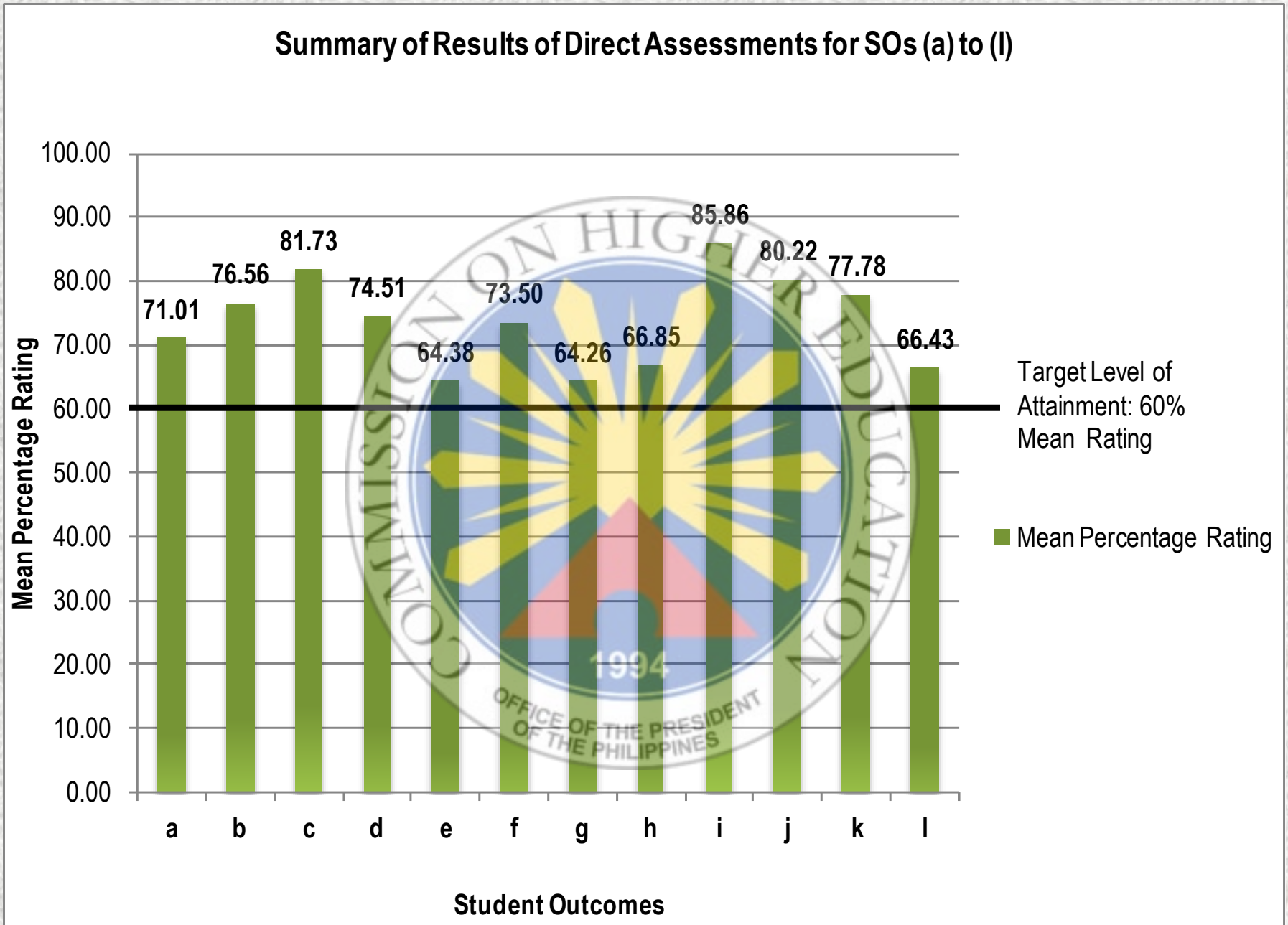
Summary Result of Student Assessment

Student Outcome (a): Apply knowledge of mathematics, science, and engineering to solve complex engineering problems.

Program: _____ Source of Assessment (Course/Section): _____ Time of Data Collection: _____

Students		Performance Indicators			Student Rating	
		Choose the appropriate mathematical, science, and engineering principles in solving problems in engineering.	Examine different approaches in solving problems in engineering and choose the most effective approach.	Apply the appropriate mathematical, science, and engineering principles to arrive at a solution	Mean Score	% Score
Over-all Students Performance	Mean Raw Score					
	Mean % Score = (Mean Raw Score/3) x 100%					

Prepared by:	Noted by:	Approved by:
Printed Name and Signature of Faculty Member	Department Chair / Dean	Vice President for Academic Affairs


Summary of Results of Direct Assessments for SOs (a) to (l)
Mean Percentage Rating
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
71.01
76.56
81.73
74.51
64.38
73.50
64.26
66.85
85.86
80.22
77.78
66.43
a
b
c
d
e
f
g
h
i
j
k
l
Student Outcomes
Target Level of Attainment: 60% Mean Rating
Mean Percentage Rating

Valid Assessment Methods Generate Useful Data

- **RELEVANT** – measures the educational outcome as *directly* as possible.
- **ACCURATE** – measures the educational outcome as *correctly* as possible.
- **USEFUL** – measures provide formative and summative results with *clear implications* for educational program evaluation and improvement.

Develop

A Valid Grading Criteria

- The **grading should be in terms of how well students meet the ILOs**.
- The assessment task should be a means to assess the outcome.
- Under a holistic, qualitative scheme, a student' s performance is judged against qualitative criteria.

What happens to the assessment results?

What happens to the assessment results?

Use it for Continual Improvement

at the program level

Continuous Quality Improvement (CQI)

- *Recommendations of the Faculty CQI Committee*

Sample CQI

Course	Enhancements in the Syllabi	SO
ECE 501 Thesis 1 ECE 506 Thesis 2	Integration of multiple constraints and applicable standards in the students' design works taking into account the health, economic, safety, social and environmental aspects as well as ethics, code of practices, standards and applicable laws.	c
ECE 004 Principles of Communications	Making the Probability and Statistics course as its pre-requisite	a

Sample Program Plans to Address Student Outcomes

Program Plans		To address SOs
1	Strengthen On- the-Job Training (OJT) program through: Monitoring of ECE students in their OJT where activities should be aligned to the field of expertise. OJTs should have assigned mentor in the company in order for them to be properly guided and monitored.	(e), (h) and (l)
2	Intensify industry linkages through OJT, plant visits and through students who will conduct an industry-based project.	(g) and (l)
4	Inclusion of patent searching as one of the activities of students enrolled in design courses to conform to intellectual property law, .	(h)

What happens to the assessment results ?

Use it for Continual Improvement

at the classroom level

REFLECT ON YOUR TEACHING

Reflective teaching…

“How can I improve?”

Reference:
Hendricks, H. (1987). Teaching to change lives .Oregon , USA : Multnomah Publishers,Inc.

Reflect on the **suitability of the intended learning outcomes** and on **what alternative teaching/learning activities and assessment tasks you might best use.**

Reference:
Biggs, J. and Tang, C. (2007) . Teaching for quality learning at university. Berkshire , England :Open-University Press Mc Graw Hill

‘What else could I be doing that might make the students learn more effectively?’

Reference:
Biggs, J. and Tang, C. (2007) . Teaching for quality learning at university. Berkshire , England :Open-University Press Mc Graw Hill

What future actions would you take to encourage a deep approach to learning in your students?

Reference:

Biggs, J. and Tang, C. (2007) . Teaching for quality learning at university. Berkshire , England :Open-University Press Mc Graw Hill

what sort of classroom climate are you creating for your students?

Reference:

Biggs, J. and Tang, C. (2007) . Teaching for quality learning at university. Berkshire , England :Open-University Press Mc Graw Hill

What's more important is how you could improve it to facilitate a more desirable learning approach.

Reference:
Biggs, J. and Tang, C. (2007) . Teaching for quality learning at university. Berkshire , England :Open-University Press Mc Graw Hill

It’s not what *we* do but **what *students* do** that’s the important thing.

Reference:

Biggs, J. and Tang, C. (2007) . Teaching for quality learning at university. Berkshire , England :Open-University Press Mc Graw Hill

Teaching is *causing* people *"to learn"*.

If the learner does not learn, we have not taught.

Reference:
Hendricks, H. (1987). Teaching to change lives .Oregon , USA : Multnomah Publishers,Inc.

MISCONCEPTIONS about OUTCOMES-BASED TEACHING AND LEARNING (OBTL)

Misconception No.1.
OBTL is a total deviation from the traditional approach of teaching

Misconception No.1. OBTL is a total deviation from the traditional approach of teaching

- *OBTL is **NOT** a total deviation from traditional approach of teaching. OBTL does not limit the Teaching Learning Activities (TLAs) to modern and new approaches of teaching. Instead, it gives emphasis on the achievement of Intended Learning Outcomes regardless of the TLA used. Therefore, **traditional teaching technique may still be applicable provided it leads to the attainment of the intended outcome.***

Misconception No. 2.
OBTL is an additional teaching requirement and an added burden on the part of the teacher

Misconception No. 2.
OBTL is an additional teaching requirement and an added burden on the part of the teacher

- *OBTL should **NOT** be regarded as additional teaching requirement or an added burden on the part of the Teacher.*
- *It is a simple task of re-aligning the contents of the existing Syllabus and lesson plan with the elements of OBTL specifically, the Intended Learning Outcomes (ILO), Teaching and Learning Activities (TLAs) and Assessment Tasks (ATs).*

Misconception No. 3.
OBTL is not "content-focused".
Therefore, the teacher may not cover the entire syllabus of the course.

Misconception No. 3.
OBTL is not "content-focused". Therefore, the teacher may not cover the entire syllabus of the course.

- *OBTL is focused on three elements namely: ILOs, TLAs, and ATs. The teacher should cover every topic that is **necessary** for the attainment of a given intended learning outcomes. If the teacher feels that a given topic is important to make the students acquire or develop the learning outcomes, then that particular topic should not be missed as part of the lesson.*

Misconception No. 4.

In OBTL, it is alright for students to become unruly inside the classroom because they are supposed to be engaged in an active learning activity.

Misconception No. 4. In OBTL, it is alright for students to become unruly inside the classroom because they are supposed to be engaged in an active learning activity.

- *OBTL does **NOT** tolerate unruly classes, the faculty member should facilitate the TLAs in an orderly manner to avoid distraction of other classes .*
- *The faculty member should be able to set the proper atmosphere for learning by implementing rules and guidelines towards maintaining discipline and orderliness in the classroom.*

Warning!

A faculty member who implements active learning activities can **NOT** automatically claim that he is doing OBTL **unless these activities are aligned toward the attainment of a particular intended learning outcome**

Misconception No. 5.

OBTL is allowing the students to study on their own without the teacher doing his/her role to facilitate the learning process.

Misconception No. 5. OBTL is allowing the students to study on their own without the teacher doing his/her role to facilitate the learning process.

- *OBTL is a paradigm shift from teacher-centered to student- centered learning, but it does **NOT** remove the teacher from his role as facilitator of the learning process.*

Misconception No. 6.

OBTL is requiring students to do Reporting

Misconception No. 6. OBTL is requiring students to do Reporting

- *OBTL encourages student-centered activities such as reporting or group presentations . However, the faculty member should actively participate in the classroom discussion and act as a facilitator and not merely an observer.*
- *He/she should be ready to give supplementary discussion in cases when the student reporters fail to elaborate the topics being discussed or when a wrong information or principle is presented.*

Misconception No. 7.

OBTL will always require students to do projects.

Misconception No. 7. OBTL will always require students to do projects.

- ***NO***. *OBTL is not always associated with student projects.There are many possible learning activities or assessment tasks that may be assigned to students.*
- *A student project may be required only if the teacher feels that it is the most appropriate learning activity and assessment task for an intended learning outcome.*

Misconception No. 8.

Every faculty member should follow a prescribed OBTL template.

Misconception No. 8. Every faculty member should follow a prescribed OBTL template.

- *There is **NO** universal format for OBTL, only the guiding principle of "constructive alignment". In OBTL, a template is **NOT** designed. What is being designed are the appropriate TLAs and ATs aligned to ILOs.*
- *The best practices on the implementation of OBTL come in various styles. No standard template is prescribed **for as long as the appropriate TLAs and ATs are applied that lead to the attainment of the ILOs.***

Misconception No.10.

The same TLAs and ATs can be applied in all courses.

Misconception No.9. The same TLAs and ATs can be applied in all courses.

- *The TLAs and ATs may vary depending on the ILO. The most appropriate TLAs or ATs should be selected and applied on a case-to-case basis for the attainment of a given ILO.*

Misconception No. 11.

OBTL is observable during classroom visitations conducted by the Dean/Department Head.

Misconception No. 11. OBTL is observable during classroom visitations conducted by the Dean/Department Head.

- *OBTL is a process which begins by identifying the Intended Learning Outcomes (ILOs), applying the approropriate Teaching and Learning Activities (TLAs) and Asssessment Tasks (ATs) and continously improving the process through a feedback mechanism toward the attainment of the desired outcomes.*

- *Some OBTL elements may be observed during classroom observations such as the TLAs being employed but the Dean/Chair can **NOT** generally assess the entire OBTL process at once.*

Misconception No. 12.

Faculty members who apply OBTL are entitled to additional pay.

Misconception No. 12. Faculty members who apply OBTL are entitled to additional pay.

- ***NO***. *It is the responsibility of every faculty member to ensure the delivery of quality education and to cope with the new demands of the teaching profession.*

Misconception No. 13.

OBTL can not be applied in co-curricular or extra-curricular activities.

Summary

How does OBTL Work?

- In OBTL, ILOs are designed to describe what the students are expected to do at the end of the course or the program.
- To facilitate the achievement of ILOs, **teaching and learning activities** and **assessments** are designed to align with the ILOs
- In OBTL, student learning is supported by classroom teaching that stimulates the learner's efforts, provide feedback, helps attain required standards, and guides progress to independence as a learner

Source: University of Hong Kong OBTL Materials

CHED OBE-MF-01

Compliance of HEIs (Section IV of CHED AO 01.s. 2014)

Using the CHED Implementation Handbook for OBE and ISA as reference, a HEI shall develop the following items which will be submitted to CHED when they apply for a permit for a new program or the approval of the transformation of existing programs to outcomes-based framework:

- The complete set of **Program Outcomes**, including its proposed additional program outcomes.
- Its proposed curriculum, and its justification including **Curriculum Map.**
- Proposed **Performance Indicators** for each outcome. Proposed measurement system for the level of attainment of each indicator.
- Proposed **Outcomes-Based Syllabus** for each course. This should already be indicative of the plan of **Delivery** of the curriculum, student assessment and of the resources to be deployed.
- Proposed system of program **Assessment And Evaluation**
- Proposed system of program **Continuous Quality Improvement (CQI)**

Essentials for Effective OBE Implementation:

- A detailed plan for outcomes-based education
- Commitment and full support from the top management
- Capacity building should be given top priority
- Continuous effort for dissemination
- Continuous quality improvement in all aspects of the implementation