AUN-QA Implementation and Gap Analysis at Programme Level

Credit:
เอกสารประกอบการอบรม AUN-QA Implementation and Gap Analysis ที่จัดโดย ทปอ. 2560

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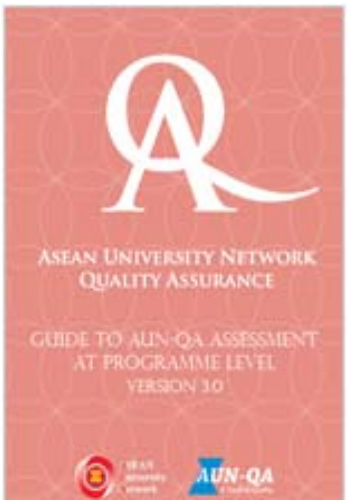
Principle References:
Guide to AUN-QA Assessment at Programme Level Version 2.0 and Version 3.0
8th AUN-QA Workshop for Accomplishing Programme Assessment (Bangkok, 27 – 30 April 2015)

Workshop Expected Learning Outcomes (ELOs)

- Apply content of AUN-QA criteria and process to QA practice at programme level
- Self-assess the current QA practice
- Identify gaps in current QA practice
- Draft SAR

Guide to AUN-QA Assessment at Programme Level Version 3.0



- **Model, Criteria and Assessment Process of AUN Actual Quality Assessment at Programme Level**
- **Associated resources (templates and samples)**
- **Effective October 2015 - on voluntary basis**
- **Fully implemented in January 2017**

http://www.aunsec.org/publications.php

PDCA Approach to AUN-QA Implementation at Programme Level

Plan
- Communicate intent
- Organize team(s)
- Develop implementation plan
- Understand AUN-QA criteria & process

Do
- Self-assessment
- Gaps analysis (Improvement plan)
- Close gaps
- Collect needed data & evidences
- Write SAR

Check
- Verify QA practice
- Evaluate progress on improvement plan
- Gather feedback on QA practice & SAR

Act
- Finalize SAR
- Internal audit
- Improve QA practice

Features of AUN-QA Model for Higher Education QA @ Programme Level

- **Design based on Outcome-based Education framework**
- **PDCA approach to quality**
- **Designed for continuous improvement to good/best practice**
- **Principle-based QA model**

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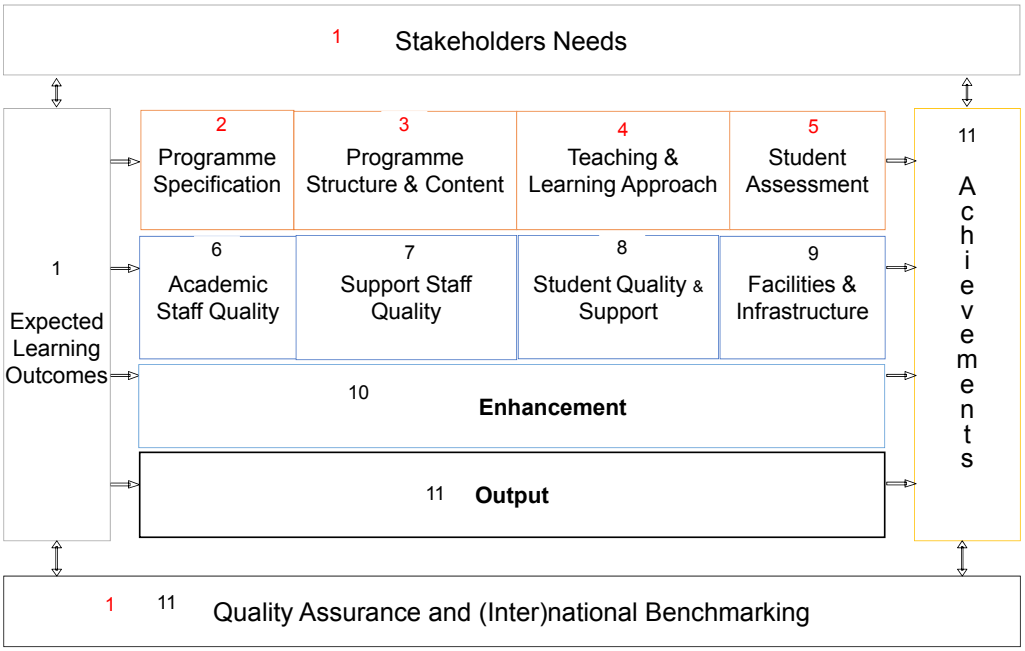
Outcome-Based Education (OBE)

Clearly focusing and organizing everything in an educational system around what is essential for all students to be able to do successfully at the end of their learning experiences. This means staring with a clear picture of what is important for students to be able to do, then, the organizing the curriculum, instruction, and assessment to make sure this learning ultimately happens. (Spady, 1994)

AUN-QA Models for Higher Education Quality Assurance at Programme Level



Criteria	Sub-criteria
1. Expected Learning Outcomes	**3**
2. Programme Specification	**3**
3. Programme Structure and Content	**3**
4. Teaching and Learning Approach	**3**
5. Student Assessment	**5**
6. Academic Staff Quality	**7**
7. Support Staff Quality	**5**
8. Student Quality and Support	**5**
9. Facilities and Infrastructure	**5**
10. Quality Enhancement	**6**
11. Output	**5**
Total	**50**

Rating Scale

Rating	Description
1	**Absolutely Inadequate** The QA practice to fulfil the criterion is not implemented. There are no plans, documents, evidences or results available. Immediate improvement must be made.
2	**Inadequate and Improvement is Necessary** The QA practice to fulfil the criterion is still at its planning stage or is inadequate where improvement is necessary. There is little document or evidence available. Performance of the QA practice shows little or poor results.
3	**Inadequate but Minor Improvement Will Make It Adequate** The QA practice to fulfil the criterion is defined and implemented but minor improvement is needed to fully meet them. Documents are available but no clear evidence to support that they have been fully used. Performance of the QA practice shows inconsistent or some results.
4	**Adequate as Expected** The QA practice to fulfil the criterion is adequate and evidences support that it has been fully implemented. Performance of the QA practice shows consistent results as expected.

Rating Scale

Rating	Description
5	**Better Than Adequate** The QA practice to fulfil the criterion is better than adequate. Evidences support that it has been efficiently implemented. Performance of the QA practice shows good results and positive improvement trend.
6	**Example of Best Practices** The QA practice to fulfil the criterion is considered to be example of best practices in the field. Evidences support that it has been effectively implemented. Performance of QA practice shows very good results and positive improvement trend.
7	**Excellent (Example of World-class or Leading Practices)** The QA practice to fulfil the criterion is considered to be excellent or example of world-class practices in the field. Evidences support that it has been innovatively implemented. Performance of the QA practice shows excellent results and outstanding improvement trends.

1. Expected Learning Outcomes

1.The curriculum is developed to promote learning, learning how to learn and to instill in students a commitment of lifelong learning (e.g. commitment to critical inquiry, development of study and information-processing skills, a willingness to experiment with new ideas and practices).
2.The curriculum offers to graduates the ability to do advanced studies, to develop their own personality, to have an academic attitude and to be competent in their field of study. The graduates should also have transferable skills, leadership skills, and should be oriented to the job market and be able to develop their careers (1.9).
3.The curriculum has clearly formulated learning outcomes, reflecting the relevant demands and needs of all stakeholders.(1.2)

1	**Expected Learning Outcomes**	1	2	3	4	5	6	7
1.1	The expected learning outcomes have been clearly formulated and aligned with the vision and mission of the university							
1.2	The expected learning outcomes cover both subject specific and generic (i.e., transferable) learning outcomes							
1.3	The expected learning outcomes clearly reflect the requirements of the stakeholders							
	Overall opinion							

Explanation

Diagnostic questions
- Why are we educating?
- What is the educational philosophy behind the programme?
- What are the expected learning outcomes?

1. Expected Learning Outcomes

1. The formulation of the expected learning outcomes takes into account and reflects the vision and mission of the institution. The vision and mission are explicit and known to staff and students.
2. The programme shows the expected learning outcomes of the graduate. Each course and lesson should clearly be designed to achieve its expected learning outcomes which should be aligned to the programme expected learning outcomes.
3. The programme is designed to cover both subject specific outcomes that relate to the knowledge and skills of the subject discipline; and generic (sometimes called transferable skills) outcomes that relate to any and all disciplines e.g. written and oral communication, problem-solving, information technology, teambuilding skills, etc.
4. The programme has clearly formulated the expected learning outcomes which reflect the relevant demands and needs of the stakeholders.

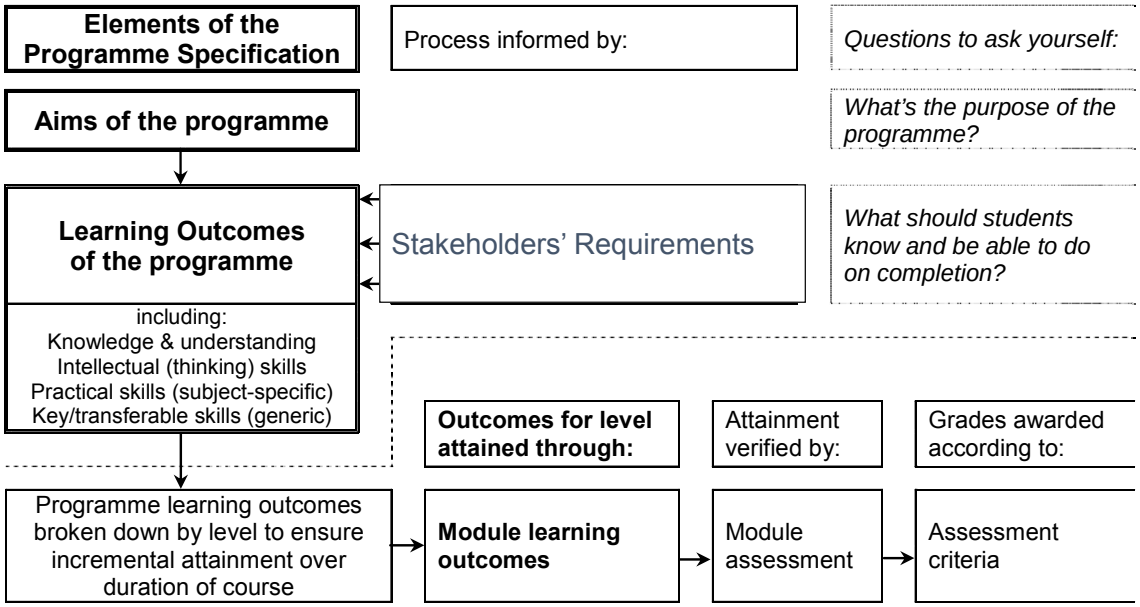
AUN-QA Criterion 1 – Check List

		1	2	3	4	5	6	7
1	**Expected Learning Outcomes**							
1.1	The expected learning outcomes have been clearly formulated and aligned with the vision and mission of the university [1,2]							
1.2	The expected learning outcomes cover both subject specific and generic (i.e. transferable) learning outcomes [3]							
1.3	The expected learning outcomes clearly reflect the requirements of the stakeholders [4]							
	Overall opinion							

Expected Learning Outcomes

- Statements of what students are expected to be able to do as a result of engaging in the learning process (studying a subject/programme).
- Expressed from the students' perspective.
- Expressed in the form of action verbs leading to observable and assessable outcomes.
- Related to criteria for assessing student performance.

Learning Outcomes and Constructive Alignment

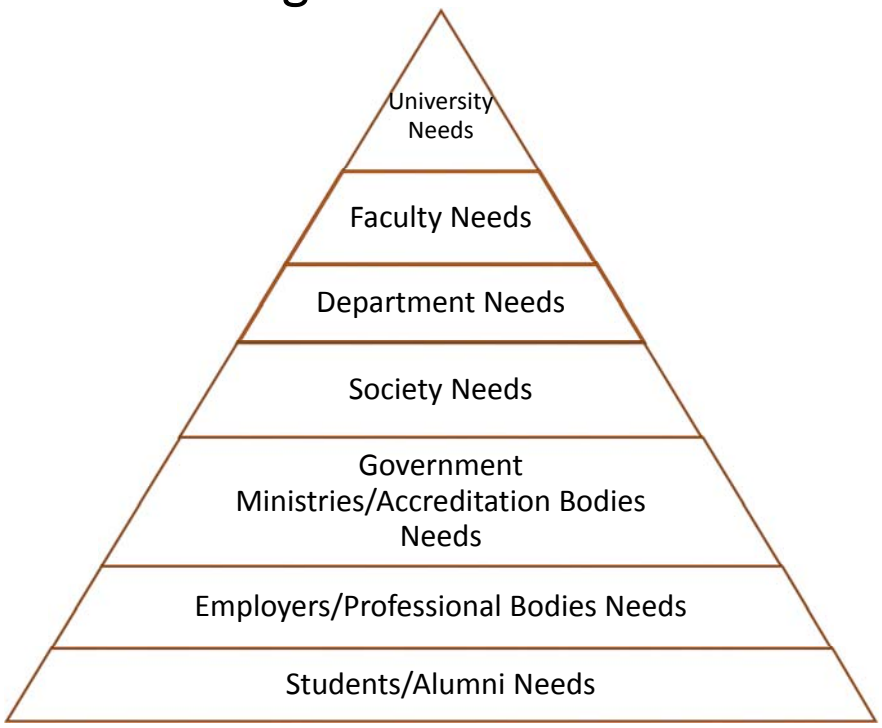


Version 2: Appendix 1b - Guide to write learning outcomes

Expected Learning Outcome

- **University level**
  - What are the attributes of an ideal graduate of the University?
- **Programme level**
  - What are the intended learning outcomes for students enrolled in the programme?
- **Subject/Unit level**
  - What are the intended learning outcomes for students taking a particular subject/unit at a particular level within the programme?

Determining Stakeholders' Needs



Aligning Stakeholders' Needs to Expected Learning Outcomes

ELOs	University	MOET	Industry	ABET/CDIO
1	F	F	M	F
2		F	M	F
3	F	F	F	F
4	F	F	F	F
5		F	P	F
6		F	P	
7	F	F	F	
8	F	F	F	F

F – Fully fulfilled
M – Moderately fulfilled
P – Partially fulfilled

Relationship Between Graduate Profile and Programme Learning Outcomes

Graduate Profile/Competences	LO1	LO2	LO3	LO4	LO5	LO6	LO7
1. A strong fundamental chemical engineering knowledge and the ability to apply and integrate knowledge to identify, formulate and solve problems of chemical engineering fields	X	X	X				
2. The professional skills necessary to be effective and succeed in the modern workforce including work well in multi-disciplinary teams, the ability to design and solve problems, and the ability to communicate effectively, and to uphold standards of ethics and professionalism	X		X	X	X	X	
3. The ability to engage in life-long learning by acquiring new skills and to remain relevant in today's fast changing environment				X			X

Source: Chemical Engineering, Universitas Indonesia

Category of Learning Outcomes

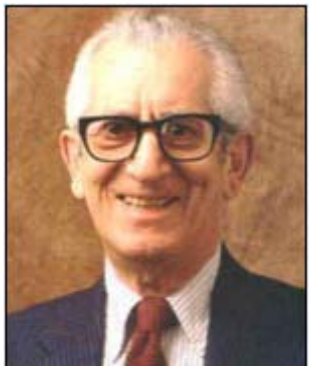
- Specific outcomes that relate to the subject discipline and the knowledge and/or skills particular to it;
- Generic (sometimes called transferable skills) outcomes that relate to any and all disciplines e.g. written, oral, problem-solving, information technology, and team working skills, etc.
  - Fundamental skills, e.g., literacy and numeracy appropriate to the level and qualification type
  - People skills, e.g., working with others and communication skills
  - Thinking skills, e.g., learning to learn, decision making and problem solving
  - Personal skills, e.g., self-direction and acting with integrity

Categories of Program Learning Outcomes (PLOs)

PLO	Outcome Statement	Specific LO	Generic LO
1		/	
2		/	
3		/	
4		/	
5			/
6			/

Formulating Learning Outcomes

Learning outcomes are statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of a process of learning.

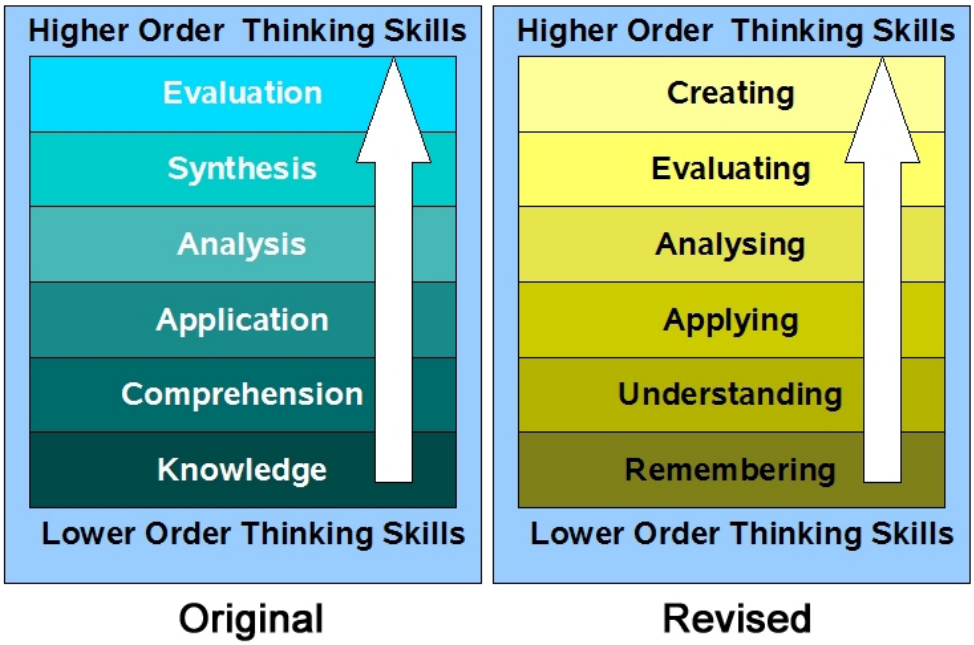


Benjamin Bloom (1913 – 1999)

Bloom's Taxonomy of Educational Objectives - Three Domains of Learning:

- Cognitive;
- Affective; and
- Psycho-motor

Bloom's Taxonomy (Revised)



Bloom's Taxonomy (Revised)

Six Cognitive Process Skills	
Levels / Cognitive Categories	**Other verbs**
Create	Generate, plan, compose, develop, create, invent, organise, construct, produce, compile, design, devise
Evaluate	Rank, assess, monitor, check, test, judge
Analyze	Analyse, break down, compare, select, contrast, deconstruct, discriminate, distinguish, identify, outline
Apply	Implement, organise, dramatise, solve, construct, demonstrate, discover, manipulate, modify, operate, predict, prepare, produce, relate, show, solve, choose
Understand	Illustrate, defend, compare, estimate, explain, classify, generalise, interpret, paraphrase, predict, rewrite, summarise, translate
Remember	Define, describe, identify, know, label, list, match, name, outline, recall, recognise, reproduce, select, state, locate

Psychomotor: Manual or Physical Skills (Skills)

Category	Verbs
Perception	Choose, describe, detect, differentiate, distinguish, identify, isolate, relate, select
Set	Begin, display, explain, move, proceed, react, show, state, volunteer
Guided response	Copy, trace, follow, react, reproduce, respond
Mechanism	Assemble, calibrate, construct, dismantle, display, fasten, fix, grind, heat, manipulate, measure, mend, mix, organize, sketch
Complex overt response	Verbs are the same as mechanism, but will have adverbs or adjectives that indicate that the performance is quicker, better, more accurate, etc.
Adaptation	Adapt, alter, change, rearrange, reorganize, revise, revise, vary
Origination	Arrange, build, combine, compose, construct, create, design, initiate, make, originate

Affective: Feelings or Emotional Areas (Attitude)

Category	Verbs
Receiving phenomena	Ask, choose, describe, follow, give, hold, identify, locate, name, point to, select, sit, reply, use
Responding to phenomena	Answer, assist, aid, comply, conform, discuss, greet, help, label, perform, practice, present, read, recite, report, select, tell, write
Valuing	Complete, demonstrate, differentiate, explain, follow, form, initiate, invite, join, justify, propose, read, report, select, share, study, work
Organization	Adhere, alter, arrange, combine, compare, complete, defend, explain, formulate, generalize, identify, integrate, modify, order, organize, prepare, relate, synthesize
Internalizing values	Act, discriminate, display, influence, listen, modify, perform, practice, propose, qualify, question, revise, serve, solve, verify

Expected Learning Outcomes (Exercise)

Below are the programme learning outcomes for a Economic and Business Management Programme:

1. possess knowledge and capability in economics and business administration;
2. have knowledge and skills in dealing with the management fields or areas which are in the country's high demand;
3. efficiently apply theory, principles and tools in analysing and synthesizing their academic work and research; and
4. possess knowledge in the fields of training, be able to use efficiently their mother tongue, foreign language and ICT technology in their real work.

Criteria 1: Sources of Evidences

- Programme and course specifications
- Course brochure and prospectus or bulletin
- Skills matrix
- Stakeholders' input
- University and faculty websites
- Curriculum review minutes and documents
- Accreditation and benchmarking reports

2. Programme Specification

1. The institution is recommended to publish and communicate the programme and course specifications for each programme it offers, and give detailed information about the programme to help stakeholders make an informed choice about the programme.
2. Programme specification including course specifications describes the expected learning outcomes in terms of knowledge, skills and attitudes. They help students to understand the teaching and learning methods that enable the outcome to be achieved; the assessment methods that enable achievement to be demonstrated; and the relationship of the programme and its study elements.

AUN-QA Criterion 2 – Check List

2	**Programme Specification**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2.1	The information in the programme specification is comprehensive and up-to-date [1, 2]							
2.2	The information in the course specification is comprehensive and up-to-date [1, 2]							
2.3	The programme and course specifications are communicated and made available to the stakeholders [1, 2]							
	Overall opinion							

The information to be included in the programme specification is listed below.

- Awarding body/institution
- Teaching institution (if different)
- Details of the accreditation by a professional or statutory body
- Name of the final award
- Programme title
- Expected Learning outcomes of the programme
- Admission criteria or requirements to the programme
- Relevant subject benchmark statements and other external and internal reference points used to provide information on programme outcomes
- Programme structure and requirements including levels, courses, credits, etc.
- Date on which the programme specification was written or revised

The information to be included in the course specification is listed below.

- Course title
- Course requirements such as pre-requisite to register for the course, credits, etc.
- Expected learning outcomes of the course in terms of knowledge, skills and attitudes
- Teaching, learning and assessment methods to enable outcomes to be achieved and demonstrated
- Course description and outline or syllabus
- Details of student assessment
- Date on which the course specification was written or revised.

3. Programme Structure and Content

1. The curriculum, teaching and learning methods and student assessment are constructively aligned to achieve the expected learning outcomes.
2. The curriculum is designed to meet the expected learning outcomes where the contribution made by each course in achieving the programme's expected learning outcomes is clear.
3. The curriculum is designed so that the subject matter is logically structured, sequenced, and integrated.
4. The curriculum structure shows clearly the relationship and progression of basic courses, the intermediate courses, and the specialised courses.
5. The curriculum is structured so that it is flexible enough to allow students to pursue an area of specialisation and incorporate more recent changes and developments in the field.
6. The curriculum is reviewed periodically to ensure that it remains relevant and up-to-date.

AUN-QA Criterion 3 – Check List

3	**Programme Structure and Content**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3.1	The curriculum is designed based on constructive alignment with the expected learning outcomes [1]							
3.2	The contribution made by each course to achieve the expected learning outcomes is clear [2]							
3.3	The curriculum is logically structured, sequenced, integrated and up-to-date [3, 4, 5, 6]							
	Overall opinion							

Four Basic Elements of Constructive Alignment

1. **Clearly define the expected learning outcomes (ELOs or PLOs)**
2. **Design the curriculum aligning to the ELOs (Backward Curriculum Design: Content, Courses, Structure, Study Plan, Curriculum Mapping)**
3. **Select appropriate teaching and learning activities that are likely to ensure that the ELOs will be achieved for each course**
4. **Choose appropriate assessment methods to assess the student learning outcomes validly and reliably**

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Curriculum Mapping

Curriculum mapping is a planning tool that can be used at any stage in the curriculum development cycle.

It provides a curriculum map which is a graphical description or a synopsis of curriculum components that can be used to align courses and lead to the achievement of the programme learning outcomes.

Skill Matrix or Curriculum Map

	Introduced	Reinforced	Assessed (exit level)
Outcome #1	Subject A (Lecture)	Subject C (Case-based learning) Subject F (PBL)	
Outcome #2	Subject B (Interactive lecture) Subject C (Self-directed learning)	Subject D (Laboratory) Subject G (Placement)	Subject H (Final year project)
Outcome #3		Subject E (Peer tutoring) Programme A (organised by SAO)	

4. Teaching and Learning Approach

1. The teaching and learning approach is often dictated by the educational philosophy of the university. Educational philosophy can be defined as a set of related beliefs that influences what and how students should be taught. It defines the purpose of education, the roles of teachers and students, and what should be taught and by what methods.
2. Quality learning is understood as involving the active construction of meaning by the student, and not just something that is imparted by the teacher. It is a deep approach of learning that seeks to make meaning and achieve understanding.
3. Quality learning is also largely dependent on the approach that the learner takes when learning. This in turn is dependent on the concepts that the learner holds of learning, what he or she knows about his or her own learning, and the strategies she or he chooses to use.
4. Quality learning embraces the principles of learning. Students learn best in a relaxed, supportive, and cooperative learning environment.
5. In promoting responsibility in learning, teachers should:
   a. create a teaching-learning environment that enables individuals to participate responsibly in the learning process; and
   b. provide curricula that are flexible and enable learners to make meaningful choices in terms of subject content, programme routes, approaches to assessment and modes and duration of study.
6. The teaching and learning approach should promote learning, learning how to learn and instill in students a commitment of lifelong learning (e.g. commitment to critical inquiry, information-processing skills, a willingness to experiment with new ideas and practices, etc.).

AUN-QA Criterion 4 – Check List

		1	2	3	4	5	6	7
4	**Teaching and Learning Approach**							
4.1	The educational philosophy is well articulated and communicated to all stakeholders [1]							
4.2	Teaching and learning activities are constructively aligned to the achievement of the expected learning outcomes [2, 3, 4, 5]							
4.3	Teaching and learning activities enhance life-long learning [6]							
	Overall opinion							

Educational Philosophy

What is an educational philosophy?

A set of related beliefs (behind every school and every teacher) that influences what and how students are taught. It represents answers to questions about the purpose of schooling, a teacher's role, and what should be taught and by what methods.

Educational Philosophy (NUS)

NUS Educational Philosophy

The NUS community of students, teachers, and administrators, seeks to help students become individuals with **questioning** minds, willing and able to examine what is taken for granted, and who engage in rigorous inquiry within and beyond assumed disciplinary borders; individuals of **well-rounded** mind and character; **constructive and responsible** members of a community, ready to assume leadership and conscious of the impact of their activities on others; **global citizens**, who are sensitive to diverse cultural settings, aware of the potential they offer, and capable of operating in them, while conscious of the particularity, value, and limits of their own perspectives; bearers of a **resourceful and enterprising** spirit, in public and private life; and able **communicators** who can articulate and defend ideas effectively.

The University seeks to inculcate students with the above qualities through both formal and informal education that extends from the classroom environment to a larger institutional culture outside the classroom. The latter includes the myriad learning opportunities in residential living.

NUS recognizes its distinctive educational role as a university with both an **Asian and international identity**. This unique position creates the possibility of equally unique perspectives, and allows the University to retain a global outlook while drawing from and reflecting upon the character and resources of the region.

Source: http://www.nus.edu.sg/registrar/edu.html

Four Basic Elements of Constructive Alignment

1. **Clearly define the expected learning outcomes (ELOs or PLOs)**
2. **Design the curriculum aligning to the ELOs (Backward Curriculum Design: Content, Courses, Structure, Study Plan, Curriculum Mapping)**
3. **Select appropriate teaching and learning activities that are likely to ensure that the ELOs will be achieved for each course**
4. **Choose appropriate assessment methods to assess the student learning outcomes validly and reliably**

Alignment of ELO and TLA

Typical ELO	Possible TLAs
Describe	Set reading, lecture, report on
Explain	Tutorial, activities, write essay
Integrate	Project, assignment
Apply	Project, case study
Solve problem	PBL, case study
Design, create	Project, poster
Hypothesise	Experiment, project
Reflect	Reflective diary

- The point is not how you are going to teach but how and what you want your students to learn.
- NOTE! Many of these TLAs can be assessments tasks as well. Then you have excellent alignment.

PLOs from Curriculum Mapping

Course/Subject.....

CLO 1: Action verb + Object + Modification

CLO 2: .....

CLO 3: .....

Topic	CLO Number	Content	Teaching and Learning Methods	Assessment Methods
1				
2				
3				
4				

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Example of Constructive Alignment

CLOs: On completion of this course, students should be able to…	**Teaching and Learning Activities**
identify the main signs and symptoms of psychosis	-Lecture on signs and symptoms -In class exercise a/o quizzes
formulate medicinal preparations for external use	-Lecture on chemical properties of excipients, external preparations and formulation -Lab: formulation and preparation of various medicines -Group project: formulation of assigned active ingredients
Develop a research project in the discipline	-Lecture on research methods and proposal development -Presentation and case studies on development of research questions -Student presentation and discussion on current research issues

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Lifelong Learning

Lifelong learning is defined as “all learning activity undertaken throughout Life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment-related perspective”

Source: European Commission

Lifelong Learning

The European Reference Framework sets out eight key competences for lifelong learning:

1. **Communication in the mother tongue;**
2. **Communication in foreign languages;**
3. **Mathematical competence and basic competences in science and technology;**
4. **Digital competence;**
5. **Learning to learn;**
6. **Social and civic competences;**
7. **Sense of initiative and entrepreneurship;**
8. **Cultural awareness and expression.**

Source: European Commission

Criterion 4: Subset of Diagnostic Questions (p.24)

If research is a core activity for the university:

- When do students come into contact with research for the first time?
- How is the interrelationship between education and research expressed in the programme?
- How are research findings applied in the programme?

If practical training and/or community service is a specific aspect of the teaching and learning approach:

- Is practical training a compulsory or optional part of the programme?
- How many credits are allocated to these activities?
- Is the level of the practical training and/or community service satisfactory?
- What benefits do communities gain from the service provided by the programme?
- What benefits do employers and students gain from the practical training?
- Are there any bottlenecks in the practical training? If so, what causes them?
- How are students being coached?
- How is the assessment done?

5. Student Assessment

1. Assessment covers:
   - New student admission; Continuous assessment during the course of study; Final/exit test before graduation
2. In fostering constructive alignment, a variety of assessment methods should be adopted and be congruent with the expected learning outcomes. They should measure the achievement of all the expected learning outcomes of the programme and its courses.
3. A range of assessment methods is used in a planned manner to serve diagnostic, formative, and summative purposes.
4. The student assessments including timelines, methods, regulations, weight distribution, rubrics and grading should be explicit and communicated to all concerned.
5. Standards applied in assessment schemes are explicit and consistent across the programme.
6. Procedures and methods are applied to ensure that student assessment is valid, reliable and fairly administered.
7. The reliability and validity of assessment methods should be documented and regularly evaluated and new assessment methods are developed and tested.
8. Students have ready access to reasonable appeal procedures.

AUN-QA Criterion 5 – Check List

5	**Student Assessment**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5.1	The student assessment is constructively aligned to the achievement of the expected learning outcomes [1, 2]							
5.2	The student assessments including timelines, methods, regulations, weight distribution, rubrics and grading are explicit and communicated to students [4, 5]							
5.3	Methods including assessment rubrics and marking schemes are used to ensure validity, reliability and fairness of student assessment [6, 7]							
5.4	Feedback of student assessment is timely and helps to improve learning [3]							
5.5	Students have ready access to appeal procedure [8]							
	Overall opinion							

Assessment Tasks

- Provide students the opportunity to demonstrate whether or not they have achieved the ILOs and what level their performance is in those ILOs.
- Should be appropriately designed or selected to address the ILOs that we want to assess.
- Different assessment methods (tasks) address different ILOs. There should therefore be several kinds of task.
- Provide the evidence allowing teachers to make a judgment about the level of a student's performance against the ILOs and to award a final grade.

Alignment of ELO and Assessment Tasks

Common ELOs	Possible Assessment
Describe	Assignment, essay question exam
Explain	Assignment, essay question exam,
Integrate	Project, assignment
Analyse	Case study, assignment
Apply	Project, case study, experiment
Solve problem	Case study, project, experiment
Design, create	Project, experiment, poster
Reflect	Reflective diary, portfolio, self-assessment
Communicate	A range of oral, writing or listening

Student Assessment

An example of a assessment rubric – criterion-referenced

Criteria	Skill Domains	Fail	Pass	Credit	Distinction	Higher Distinction
Introduction	5	0 – 49% (0 < 2.5)	50 – 59% (2.5 - <3)	60 – 69% (3 - <3.5)	70 – 79% (3.5 - <4)	80 – 100% (4 – 5)
	Knowledge and Understanding of Research Topic	Neither implicit nor explicit reference is made to the topic that is to be examined.	The topic that is to be examined is briefly introduced.	The topic is introduced, and the direction of the report is clear.	The topic is well introduced, and the direction of the report is clear.	The topic is well introduced, and the direction of the report is very clear.
Findings	10	0 – 49% (<5)	50 – 59% (5 – <6)	60 – 69% (6 - <7)	70 – 79% (7 - <8)	80 – 100% (8 – 10)
	Thinking and Inquiry Skills	Insufficient and/or inappropriate research sources Ineffective organisation Material is interpreted with limited accuracy	Research sources are sufficient and appropriate Organisation of material is somehow effective Material is interpreted with some accuracy	Research sources are sufficient and appropriate Organisation of material is effective Material is interpreted with accuracy	Research sources are abundant and appropriate Organisation of material is highly effective Material is interpreted with high accuracy	Research sources are abundant and completely appropriate Organisation of material is highly effective Material is interpreted with very high accuracy

Student Assessment (Exercise)

		Poor	Passable	Excellent	Comments
1	Source Problems (5%)	1 2 3 4	5 6 7	8 9 10	
2	Secondary Problems (10%)				
	- clarity of definition	1 2 3 4	5 6 7	8 9 10	
	- comprehensiveness	1 2 3 4	5 6 7	8 9 10	
3	Analysis (45%)				
	- application of concepts	1 2 3 4	5 6 7	8 9 10	
	- data analysis (financial, marketing)	1 2 3 4	5 6 7	8 9 10	
	- use of critical reasoning skills	1 2 3 4	5 6 7	8 9 10	
4	Recommended Alternative (10%)				
	- is justification convincing?	1 2 3 4	5 6 7	8 9 10	
	- use of theory to justify	1 2 3 4	5 6 7	8 9 10	
5	Overall Presentation Standard (10%)				
	- structure and organisation	1 2 3 4	5 6 7	8 9 10	
	- writing mechanics	1 2 3 4	5 6 7	8 9 10	
	- proof reading	1 2 3 4	5 6 7	8 9 10	
	- referencing	1 2 3 4	5 6 7	8 9 10	
	- bibliography	1 2 3 4	5 6 7	8 9 10	

Student Assessment (Exercise)

Assessable Components	Marker's Comments	Weight
Structure and Layout Legibly and professionally presented Effective paragraph structure Writing Spelling		2.5
Content *Case study*: Synopsis, discussion and identification of the case study issues *Diagnostic tools*: Application and justification of at least two diagnostic tools from the OD Consultant's Toolkit to identify the primary problem, the secondary problem/s and/or to suggest solutions *Recommendations*: Clearly linked to the primary problem and secondary problems, prioritised, justified and supported by relevant theories *Conclusion*		20
References Chicago style only, in-text citations, reference list accurate & alphabetical		2.5

Criterion 5: Diagnostic Questions on Student Project

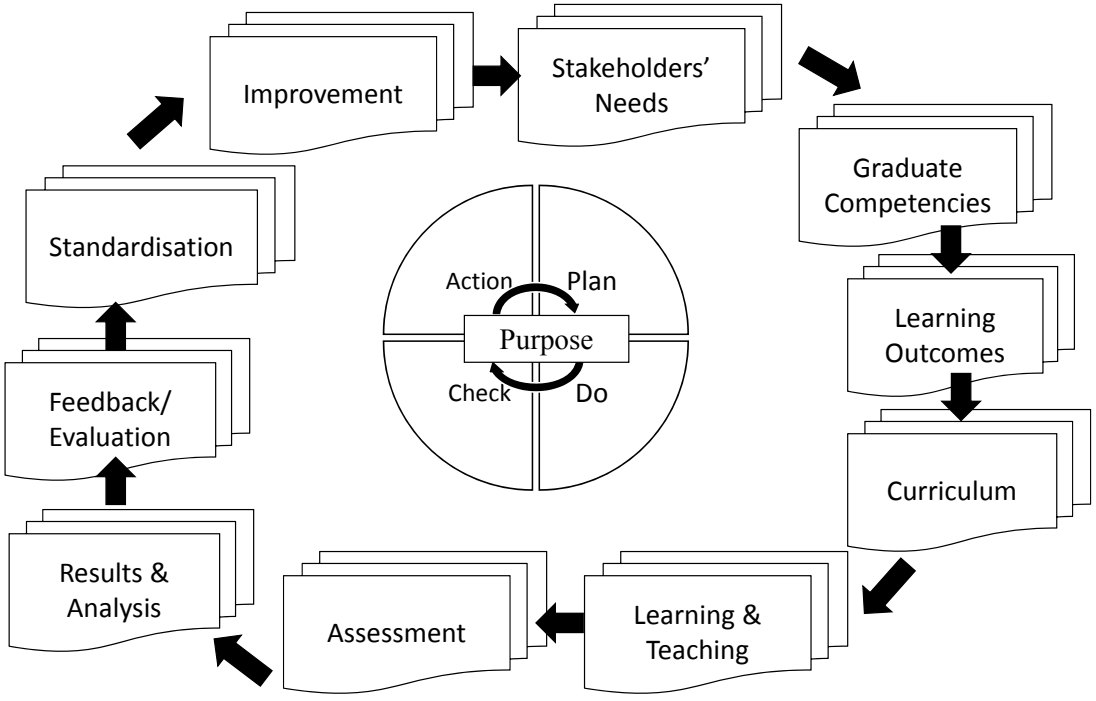
A special form of student assessment is the final project (dissertation, thesis or project). This requires students to demonstrate their knowledge and skills and their ability to manipulate the knowledge in a new situation.

- Do clear regulations exist for the final project?
- What criteria have been formulated to assess the final project?
- What does the preparation for producing the final project involve (in terms of content, methods, and skills)?
- Is the level of the final project satisfactory?
- Do any bottlenecks exist for producing final project? If so, why?
- How are students being coached?

Example of Constructive Alignment

CLOs: On completion of this course, students should be able to…	**Teaching and Learning Activities**	**Assessment Methods**
identify the main signs and symptoms of psychosis	-Lecture on signs and symptoms -In class exercise a/o quizzes	Multiple Choice Questions
formulate medicinal preparations for external use	-Lecture on chemical properties of excipients, external preparations and formulation -Lab: formulation and preparation of various medicines -Group project: formulation of assigned active ingredients	-Short Answers on chemical properties of excipients, external preparations and formulation -Lab performance -Presentation and features of finished products
Develop a research project in the discipline	-Lecture on research methods and proposal development -Presentation and case studies on development of research questions -Student presentation and discussion on current research issues	-Research proposal **Anuwong, K. 2017**

Programme IQA



6. Academic Staff Quality

1. Both short-term and long-term planning of academic staff establishment or needs (including succession, promotion, re-deployment, termination, and retirement plans) are carried out to ensure that the quality and quantity of academic staff fulfil the needs for education, research and service.

2. Staff-to-student ratio and workload are measured and monitored to improve the quality of education, research and service.

3. Competences of academic staff are identified and evaluated. *A competent academic staff will be able to:*

- *design and deliver a coherent teaching and learning curriculum;*
- *apply a range of teaching and learning methods and select most appropriate*
- *assessment methods to achieve the expected learning outcomes;*
- *develop and use a variety of instructional media;*
- *monitor and evaluate their own teaching performance and evaluate courses they deliver;*
- *reflect upon their own teaching practices; and*
- *conduct research and provide services to benefit stakeholders*

6. Academic Staff Quality

4. Recruitment and promotion of academic staff are based on merit system, which includes teaching, research and service.

5. Roles and relationship of academic staff members are well defined and understood.

6. Duties allocated to academic staff are appropriate to qualifications, experience, and aptitude.

7. All academic staff members are accountable to the university and its stakeholders, taking into account their academic freedom and professional ethics.

8. Training and development needs for academic staff are systematically identified, and appropriate training and development activities are implemented to fulfil the identified needs.

9. Performance management including rewards and recognition is implemented to motivate and support education, research and service.

10. The types and quantity of research activities by academic staff are established, monitored and benchmarked for improvement.

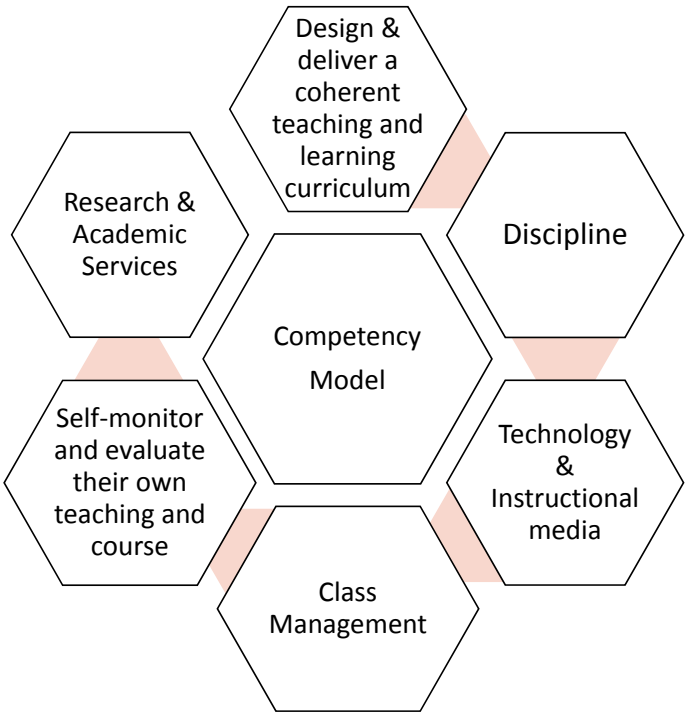
AUN-QA Criterion 6 – Check List

		1	2	3	4	5	6	7
6	Academic Staff Quality							
6.1	Academic staff planning (considering succession, promotion, re-deployment, termination, and retirement) is carried out to fulfill the needs for education, research and service [1]							
6.2	Staff-to-student ratio and workload are measured and monitored to improve the quality of education, research and service [2]							
6.3	Recruitment and selection criteria including ethics and academic freedom for appointment, deployment and promotion are determined and communicated [4,5,6,7]							
6.4	Competences of academic staff are identified and evaluated [3]							

AUN-QA Criterion 6 – Check List

		1	2	3	4	5	6	7
6	Academic Staff Quality							
6.5	Training and developmental needs of academic staff are identified and activities are implemented to fulfill them [8]							
6.6	Performance management including rewards and recognition is implemented to motivate and support education, research and service [9]							
6.7	The types and quantity of research activities by academic staff are established, monitored and benchmarked for improvement [10]							
	Overall opinion							

Competencies of Academic Staff



6. Academic Staff Quality

Size of the staff and their qualifications (last 5 academic years)

Category	M	F	Total		Percentage of PhDs
			Headcounts	FTEs*	
Professors					
Associate/ Assistant Professors					
Full time lecturers					
Part time lecturers					
Visiting professors/ lecturers					
Total					

Figure 2.3 – Number of Academic Staff (specify reference date and method of calculation used for FTE of academic staff)

Example: Full-Time Equivalent (FTE) Calculation

Method 1: Investment of time

1 FTE = 40 hours per week (full-time employment)

FTE of a staff working 8 hours per week of work = 0.2

Method 2: Teaching load

Official full-time teaching load is 4 courses/semester/person

Each course = 0.25 FTE

Staff member who is assigned 2 courses = 2 X 0.25 = 0.5FTE

6. Academic Staff Quality

Staff-to-Student Ratio

Academic Year	Total FTEs of Academic Staff	Total FTEs of Students	Staff-to-Student Ratio

Figure 2.4* – Staff-to-Student Ratio *(specify the method of calculation used for FTE of students)

6. Academic Staff Quality

Research Activities

Academic Year	Types of Publication				Total	No. of Publications Per Academic Staff
	In-house/ Institutional	National	Regional	International		

Figure 2.5 - Types and Number of Research Publications

7. Support Staff Quality

1. Both short-term and long-term planning of support staff establishment or needs of the library, laboratory, IT facility and student services are carried out to ensure that the quality and quantity of support staff fulfil the needs for education, research and service.

2. Recruitment and selection criteria for appointment, deployment and promotion of support staff are determined and communicated. Roles of support staff are well defined and duties are allocated based on merits, qualifications and experiences.

3. Competences of support staff are identified and evaluated to ensure that their competencies remain relevant and the services provided by them satisfy the stakeholders' needs.

4. Training and development needs for support staff are systematically identified, and appropriate training and development activities are implemented to fulfil the identified needs.

5. Performance management including rewards and recognition is implemented to motivate and support education, research and service.

AUN-QA Criterion 7 – Check List

		1	2	3	4	5	6	7
7	Support Staff Quality							
7.1	Support staff planning (at the library, laboratory, IT facility and student services) is carried out to fulfil the needs for education, research and service [1]							
7.2	Recruitment and selection criteria for appointment, deployment and promotion are determined and communicated [2]							
7.3	Competences of support staff are identified and evaluated [3]							
7.4	Training and developmental needs of support staff are identified and activities are implemented to fulfil them [4]							
7.5	Performance management including rewards and recognition is implemented to motivate and support education, research and service [5]							
	Overall opinion							

7. Support Staff Quality

Use Figure 2.6 to specify the number of support staff available in the last 5 academic years.

Support Staff	Highest Educational Attainment				Total
	High School	Bachelor's	Master's	Doctoral	
Library Personnel					
Laboratory Personnel					
IT Personnel					
Administrative Personnel					
Student Services Personnel (enumerate the services)					
Total					

Figure 2.6 - Number of Support Staff (specify reference date)

NUS: Establishing Service Standards

Service	Standards
Academic Administration **Processing of Transcript Requests**	• Within 4 working days for graduate degrees and students on non-graduating programmes; • Within 7 working days for undergraduate degrees (excludes delivery time by post)
Study and Learning Support **Library**	• Keep to the library opening hours published on the portal • Attend to 95% of in-person queries within 3 minutes • Provide access to the library portal and Library Integrated Catalogue (LINC) 99% of the time • Provide access to subscribed e-resources 99% of the time • Make available all books returned at the Loans Desk within half an hour
Student Services	Student Service Centre • Attend to 90% of walk-in customers within 8 minutes of waiting time

8. Student Quality and Support

1. The student intake policy and the admission criteria to the programme are clearly defined, communicated, published, and up-to-date.

2. The methods and criteria for the selection of students are determined and evaluated.

3. There is an adequate monitoring system for student progress, academic performance, and workload. Student progress, academic performance and workload are systematically recorded and monitored, feedback to students and corrective actions are made where necessary.

4. Academic advice, co-curricular activities, student competition, and other student support services are available to improve learning and employability.

5. *In establishing a learning environment to support the achievement of quality student learning, the institution should provide a physical, social and psychological environment that is conducive for education and research as well as personal well-being.*

AUN-QA Criterion 8 – Check List

		1	2	3	4	5	6	7
8	Student Quality and Support							
8.1	The student intake policy and admission criteria are defined, communicated, published, and up-todate [1]							
8.2	The methods and criteria for the selection of students are determined and evaluated [2]							
8.3	There is an adequate monitoring system for student progress, academic performance, and workload [3]							
8.4	Academic advice, co-curricular activities, student competition, and other student support services are available to improve learning and employability [4]							
8.5	The physical, social and psychological environment is conducive for education and research as well as personal well-being [5]							
	Overall opinion							

Student Intakes

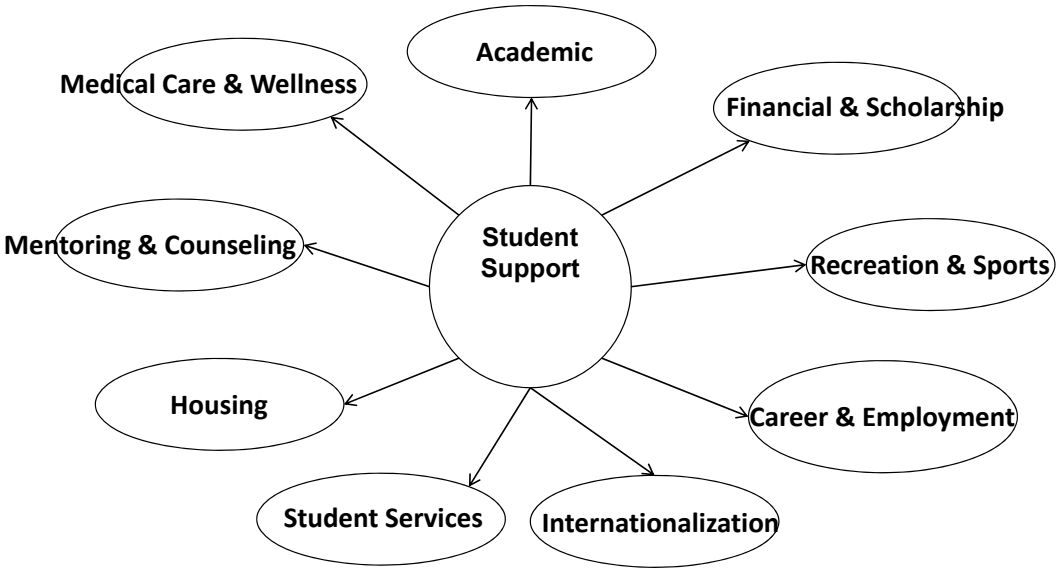
Academic Year	Applicants		
	No. Applied	No. Offered	No. Admitted/Enrolled

Figure 2.7 - Intake of First-Year Students (last 5 academic years)

Academic Year	Students					
	1st Year	2nd Year	3rd Year	4th Year	>4th Year	Total

Figure 2.8 - Total Number of Students (last 5 academic years)

8. Student Support



9. Facility and Infrastructure

1. The physical resources to deliver the curriculum, including equipment, materials and information technology are sufficient.

2. Equipment is up-to-date, readily available and effectively deployed.

3. Learning resources are selected, filtered, and synchronised with the objectives of the study programme.

4. A digital library is set up in keeping with progress in information and communication technology.

5. Information technology systems are set up to meet the needs of staff and students.

6. The institution provides a highly accessible computer and network infrastructure that enables the campus community to fully exploit information technology for teaching, research, services and administration.

7. Environmental, health and safety standards and access for people with special needs are defined and implemented.

AUN-QA Criterion 9 – Check List

		1	2	3	4	5	6	7
9	Facilities and Infrastructure							
9.1	The teaching and learning facilities and equipment (lecture halls, classrooms, project rooms, etc.) are adequate and updated to support education and research [1]							
9.2	The library and its resources are adequate and updated to support education and research [3, 4]							
9.3	The laboratories and equipment are adequate and updated to support education and research [1, 2]							
9.4	The IT facilities including e-learning infrastructure are adequate and updated to support education and research [1, 5, 6]							
9.5	The standards for environment, health and safety; and access for people with special needs are defined and implemented [7]							
	Overall opinion							

10. Quality Enhancement

1. The curriculum is developed with inputs and feedback from academic staff, students, alumni and stakeholders from industry, government and professional organisations.

2. The curriculum design and development process is established and it is periodically reviewed and evaluated. Enhancements are made to improve its efficiency and effectiveness.

3. The teaching and learning processes and student assessment are continuously reviewed and evaluated to ensure their relevance and alignment to the expected learning outcomes.

4. Research output is used to enhance teaching and learning.

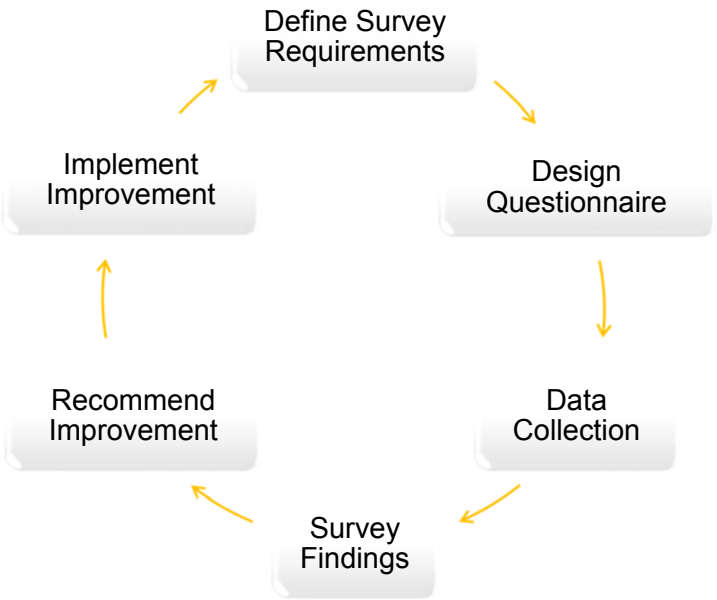
5. Quality of support services and facilities (at the library, laboratory, IT facility and student services) is subject to evaluation and enhancement.

6. Feedback mechanisms to gather inputs and feedback from staff, students, alumni and employers are systematic and subjected to evaluation and enhancement.

AUN-QA Criterion 10 – Check List

		1	2	3	4	5	6	7
10	Quality Enhancement							
10.1	Stakeholders' needs and feedback serve as input to curriculum design and development [1]							
10.2	The curriculum design and development process is established and subjected to evaluation and enhancement [2]							
10.3	The teaching and learning processes and student assessment are continuously reviewed and evaluated to ensure their relevance and alignment [3]							
10.4	Research output is used to enhance teaching and learning [4]							
10.5	Quality of support services and facilities (at the library, laboratory, IT facility and student services) is subjected to evaluation and enhancement [5]							
10.6	The stakeholder's feedback mechanisms are systematic and subjected to evaluation and enhancement [6]							
	Overall opinion							

Stakeholders' Feedback



- Stakeholders
- Frequency
- Sample size
- Response rate
- Quantitative and qualitative feedback
- Improvement strategy
- Link to Criterion 11 – Stakeholders' Satisfaction

11. Output

1. The quality of the graduates (such as pass rates, dropout rates, average time to graduate, employability, etc.) is established, monitored and benchmarked; and the programme should achieve the expected learning outcomes and satisfy the needs of the stakeholders.

2. Research activities carried out by students are established, monitored and benchmarked; and they should meet the needs of the stakeholders.

3. Satisfaction levels of staff, students, alumni, employers, etc. are established, monitored and benchmarked; and that they are satisfied with the quality of the programme and its graduates.

AUN-QA Criterion 11 – Check List

		1	2	3	4	5	6	7
11	Output							
11.1	The pass rates and dropout rates are established, monitored and benchmarked for improvement [1]							
11.2	The average time to graduate is established, monitored and benchmarked for improvement [1]							
11.3	Employability of graduates is established, monitored and benchmarked for improvement [1]							
11.4	The types and quantity of research activities by students are established, monitored and benchmarked for improvement [2]							
11.5	The satisfaction levels of stakeholders are established, monitored and benchmarked for improvement [3]							
	Overall opinion							

AUN-QA Criterion 11: Output on Pass Rate and Dropout Rate

Provide information on the pass rates and dropout rates of the last 5 cohorts in Figure 2.9.

Academic Year	Cohort Size	% completed first degree in			% dropout during			
		3 Years	4 Years	>4 Years	1st Year	2nd Year	3rd Year	4th Years & Beyond

Figure 2.9 - Pass Rates and Dropout Rates (last 5 cohorts)

Relationship of 11 criteria

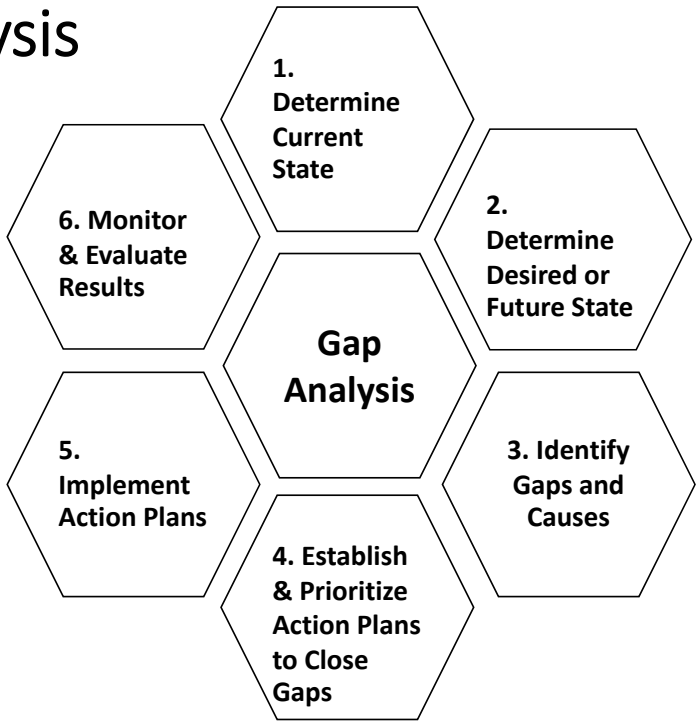
AUN-QA Criterion	1	2	3	4	5	6	7	8	9	10	11
1	1.1 1.2 1.3	2.1 2.2	3.1 3.2	4.2 4.3	5.1 5.3	6.4				10.1 10.3	11.5
2	1.1 1.2	2.1 2.2 2.3	3.1 3.2 3.3	4.2	5.1 5.2 5.3	6.4		8.4			11.5
3	1.1 1.2	2.1 2.2 2.3	3.1 3.2 3.3	4.2 4.3	5.1 5.2 5.3	6.4				10.2 10.3	11.5
4	1.1 1.2	2.1 2.2	3.1 3.2	4.1 4.2 4.3	5.1	6.4		8.5	9.1 9.2 9.3 9.4	10.3	11.5
5	1.1 1.2	2.1 2.2 2.3	3.1 3.2	4.1 4.2	5.1 5.2 5.3 5.4 5.5	6.4		8.3 8.4 8.5		10.3	11.5
6	1.1 1.2 1.3	2.3	3.1 3.2 3.3	4.1 4.2 4.3	5.1 5.2 5.3 5.4	6.1 6.2 6.3 6.4 6.5 6.6 6.7		8.3 8.4	9.1 9.2 9.3 9.4	10.1 10.3 10.4 10.6	11.4 11.5

Relationship of 11 criteria

AUN-QA Criterion	1	2	3	4	5	6	7	8	9	10	11
7							7.1 7.2 7.3 7.4 7.5	8.5	9.1 9.2 9.3 9.4 9.5	10.1 10.5 10.6	11.5
8		2.3		4.1 4.2 4.3	5.2 5.3 5.4 5.5	6.4	7.3 7.5	8.1 8.2 8.3 8.4 8.5	9.1 9.2 9.3 9.4 9.5	10.1 10.3 10.4 10.5 10.6	11.4 11.6
9				4.2 4.3		6.7	7.1 7.2 7.3 7.4 7.5	8.5	9.1 9.2 9.3 9.4 9.5	10.5 10.6	11.4 11.5
10	1.3		3.1 3.2 3.3	4.1 4.2 4.3	5.1 5.2 5.3 5.4 5.5	6.7	7.3	8.3 8.4 8.5	9.1 9.2 9.3 9.4 9.5	10.1 10.2 10.3 10.4 10.5 10.6	11.5
11	1.3	2.3	3.3	4.2 4.3	5.2 5.4 5.5	6.1 6.2 6.3 6.4 6.5 6.6	7.2 7.3 7.4 7.5	8.3 8.4 8.5	9.1 9.2 9.3 9.4 9.5	10.5 10.6	11.1 11.2 11.3 11.4 11.5

AUN-QA
A Touch of Quality

Gap Analysis



A.Kunyada 2017

Workshop: SAR writing and Gap Identification

Criterion checklist number (หมายเลขเกณฑ์ย่อย)	**Current Practice** (การดำเนินการในปัจจุบัน)	**Available Data/ Evidences** (หลักฐาน/ข้อมูลที่มี)	**Gaps in Practice** (ช่องว่างในการดำเนินการ)	**Data Needed** (ข้อมูลที่จำเป็นเพิ่มเติม)

Self-Assessment (Gaps Analysis)