Introduction to AUN QA at Programme Level

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AUN-QA at Programme Level

Version 0

Version 1
2007 – 2010
18 Criteria

Version 2
2011 – 2016
15 Criteria

Version 3
2016/17 onwards
11 Criteria

AUN-QA Framework
<table>
<thead>
<tr>
<th><strong>1st Version</strong></th>
<th><strong>2nd Version</strong></th>
<th><strong>3rd Version</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Programme Organisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Student Assessment</td>
<td>5. Student Assessment</td>
<td>5. Student Assessment</td>
</tr>
<tr>
<td>7. Staff Quality</td>
<td>6. Academic Staff Quality</td>
<td>6. Academic Staff Quality</td>
</tr>
<tr>
<td>8. Quality of Support Staff</td>
<td>7. Support Staff Quality</td>
<td>7. Support Staff Quality</td>
</tr>
<tr>
<td>9. Student Quality</td>
<td>8. Student Quality</td>
<td>8. Student Quality and Support</td>
</tr>
<tr>
<td>10. Student Advice and Support</td>
<td>9. Student Advice and Support</td>
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</tr>
<tr>
<td>13. Student Evaluation</td>
<td></td>
<td></td>
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<tr>
<td>14. Curriculum Design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Staff Development Activities</td>
<td>12. Staff Development Activities</td>
<td>6. Academic Staff Quality</td>
</tr>
</tbody>
</table>

AUN-QA Framework
AUN-QA at Programme Level (3rd Version)

1. Stakeholders’ Needs

2. Programme Specification
3. Programme Structure & Content
4. Teaching & Learning Approach
5. Student Assessment
6. Academic Staff Quality
7. Support Staff Quality
8. Student Quality & Support
9. Facilities & Infrastructure
10. Quality Enhancement
11. Output

Quality Assurance and (Inter)national benchmarking

AUN-QA Framework
Perbandingan dengan Kriteria BAN-PT
Hubungan antara SN-Dikti dengan Kriteria Akreditasi
Kepuasan Pemangku Kepentingan dan Rekognisi Masyarakat

Sistem Penjaminan Mutu Internal

Visi, Misi, Tujuan, Strategi

1. Visi, Misi, Tujuan, Strategi

2. Tata Pamong, Tata Kelola, dan Kerjasama

3. Mahasiswa

4. Sumber Daya Manusia

5. Keuangan, Sarana, dan Prasarana

6. Pendidikan

7. Penelitian

8. Pengabdian kepada Masyarakat

9. Kinerja Output, Outcome dan Dampak Hasil Pendidikan, Hasil Penelitian, Hasil PkM

Kriteria Penilaian

Kepuasan Pemangku Kepentingan dan Rekognisi Masyarakat
Guide to AUN-QA Assessment at Programme Level (3rd Version)

2 Rates of quality improvement with principles-based versus rules-based approaches

Source: “Principles-based accreditation: the way forward?” by Lindsay H Heywood
Guide to AUN-QA Assessment at Programme Level (3rd Version)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Principle Based</th>
<th>Rules Based</th>
</tr>
</thead>
<tbody>
<tr>
<td>View of Quality System</td>
<td>Integrated &amp; Systemic</td>
<td>Standalone &amp; Ad-hoc</td>
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<tr>
<td>Focus</td>
<td>Improvement</td>
<td>Compliance</td>
</tr>
<tr>
<td>Feedback</td>
<td>Formative</td>
<td>Summative</td>
</tr>
<tr>
<td>Improvement Objective</td>
<td>Continuous &amp; Contextualisation</td>
<td>Static &amp; Standardisation</td>
</tr>
<tr>
<td>Reference</td>
<td>Framework &amp; Non-Prescriptive</td>
<td>Standards &amp; Prescriptive</td>
</tr>
<tr>
<td>Assessors</td>
<td>Skilled Peers</td>
<td>Technical Experts</td>
</tr>
<tr>
<td>Assessment Climate</td>
<td>Mutual Respect &amp; Trust</td>
<td>Fearful and Suspicious</td>
</tr>
<tr>
<td>Motivation for Assessment</td>
<td>Intrinsic</td>
<td>Extrinsic</td>
</tr>
<tr>
<td>Methodology</td>
<td>Assessment or Evaluation</td>
<td>Audit</td>
</tr>
</tbody>
</table>

Adapted from source: “Principles-based accreditation: the way forward?” by Lindsay H Heywood.
Rationale for QA

- Quality graduates
- Labour market expectations
- Internationalisation of profession and globalisation
- Consumer protection
- From elite university to Institute of mass higher education
- Pressure to meet society’s needs
- Increasing importance of quality in higher education
- Student exchange and international cooperation
Principle of Expected Learning Outcomes

Forward Delivery of Learning Outcomes

Vertical Alignment of Learning Outcomes and Stakeholders’ Needs

Backward Design of Learning Outcomes

QA at Programme Level
Outcome-based Education (OBE)

OBE can be defined as “defining, organising, focusing, and directing all aspects of a curriculum on the things we want all learners to demonstrate successfully when they complete the programme”

The High Success Network (1992)
The OBE Framework

Source: Dr. Andres Winston C. Oreta, Professor in Civil Engineering, De La Salle University-Manila at http://digitalstructures.blogspot.sg/2012/01/outcomes-based-education-as-i-see-it.html
Outcome-based Education (OBE)

Key concepts and Principles of OBE

• Focus on learning outcomes
• Backwards curriculum design
• Create learning opportunities
• Constructive alignment (assessment – learning activities – learning outcomes)
Sekilas Learning Outcome
“To introduce outcomes-based education to participants”.

“Participants would understand the impacts of outcomes-based education on curriculum design and revision”.

At the end of the course, students will be able to apply knowledge of mathematics and science to solve real-world engineering problems systematically”.
Learning Outcome

- **Learning Outcomes** are carefully written statements of what a learner is expected to be able to demonstrate after completion of a learning activity
  - ... after completion of a session, a course, a module, or an entire programme of study
- **Learning Outcomes** begin with an active verb, the **object** of the verb (a noun), followed by a phrase that gives the context.
  - Example: By the end of the course, the student will be able to
    - solve (verb)
    - non-linear equations with at least 3 unknowns (object/noun)
    - to systematically solve real-world engineering problems (context)
Tips on writing learning outcomes (FORM)

- Begin each learning outcome **with an action verb**, followed by the **object of the verb**, followed by a phrase that gives the **context**.

- Use only one verb per learning outcome.

- **Avoid vague terms** like know, understand, learn, be familiar with, be exposed to, be acquainted with, and be aware of.

- **Avoid complicated sentences**. If necessary use more than one sentence to ensure clarity.
Tips on writing learning outcomes (SUBSTANCE)

- Ensure that the learning outcomes of the module relate to the overall outcomes of the programme.
- The learning outcomes must be observable and measurable.
- Ensure that the learning outcomes can be assessed.
- When writing learning outcomes, bear in mind the timescale within which the outcomes are to be achieved.
Levels of Learning Outcomes

• **Programme-level** learning outcomes *(Curriculum)* that relate to the entire programme – and are therefore phrased in more general terms

• **Course-level** or **module-level** *(RPS)* learning outcomes are specific to a given course/subject or module and can be more detailed.
Categories of Learning Outcomes

- **Subject specific** outcomes relate to the subject discipline and the knowledge/skills particular to it (*Pengetahuan dan ketrampilan khusus*)

- **Generic** outcomes (sometimes called *transferable skills*) relate to any or all disciplines
  - e.g. communication skills, prob-solving skills, IT skills, lifelong learning skills etc. (*sikap dan tata nilai serta ketrampilan umum*)
Learning Outcomes

Graduate Attributes

@Education Quality International
Bloom’s Taxonomy (Original vs Revised)
Contoh-contoh Perumusan Taksonomi Bloom
Goldilocks and the Three Bears

REMEMBER: Describe where Goldilocks lived.

UNDERSTAND: Summarize what the Goldilocks story was about..

APPLY: Construct a theory as to why Goldilocks went into the house.

ANALYZE: Differentiate between how Goldilocks reacted and how you would react in each story.

EVALUATE: Assess whether or not you think this really happened to Goldilocks.

CREATE: Compose a song, poem, or rap to convey the Goldilocks story in a new form.
Community Engagement

REMEMBER: Draw the informal organizational structure of the local community

UNDERSTAND: Describe how decisions in the community are arrived at, and by whom.

APPLY: Simulate a major community undertaking

ANALYZE: Considering the past mistakes, analyze why a given project succeeded

EVALUATE: Determine the level of satisfaction of stakeholders.

CREATE: Formulate a plan for a new community engagement project
Original Taxonomy

1.0 Knowledge
  1.10 Knowledge of specifics
    1.11 Knowledge of terminology
    1.12 Knowledge of specific facts
  1.20 Knowledge of ways and means of dealing with specifics
    1.21 Knowledge of conventions
    1.22 Knowledge of trends and sequences
    1.23 Knowledge of classifications and categories
    1.24 Knowledge of criteria
    1.25 Knowledge of methodology
  1.30 Knowledge of universals and abstractions in a field
    1.31 Knowledge of principles and generalizations
    1.32 Knowledge of theories and structures

2.0 Comprehension
  2.1 Translation
  2.2 Interpretation
  2.3 Extrapolation

3.0 Application

4.0 Analysis
  4.1 Analysis of elements
  4.2 Analysis of relationships
  4.3 Analysis of organizational principles

5.0 Synthesis
  5.1 Production of a unique communication
  5.2 Production of a plan, or proposed set of operations
  5.3 Derivation of a set of abstract relations

6.0 Evaluation
  6.1 Evaluation in terms of internal evidence
  6.2 Judgments in terms of external criteria
# Bloom’s Taxonomy (Revised)

## Six Cognitive Process Skills

<table>
<thead>
<tr>
<th>Levels / Cognitive Categories</th>
<th>19 Cognitive processes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Create</strong> Put elements together to form a coherent or functional whole; reorganise elements into a new pattern or structure</td>
<td>Generating, Planning, Producing</td>
</tr>
<tr>
<td><strong>Evaluate</strong> Make judgments based on criteria and standards</td>
<td>Checking, Critiquing</td>
</tr>
<tr>
<td><strong>Analyze</strong> Break material into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose</td>
<td>Differentiating, Organizing, Attributing</td>
</tr>
<tr>
<td><strong>Apply</strong> Carry out or use a procedure in a given situation</td>
<td>Executing, Implementing</td>
</tr>
<tr>
<td><strong>Understand</strong> Construct meaning from instructional messages, including oral, written, and graphic communication</td>
<td>Interpreting, Exemplifying, Classifying, Summarizing, Inferring, Comparing, Explaining</td>
</tr>
<tr>
<td><strong>Remember</strong> Retrieve relevant knowledge from long-term memory</td>
<td>Recognizing, Recalling</td>
</tr>
<tr>
<td>Levels / Cognitive Categories</td>
<td>Other verbs</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Create</td>
<td>Generate, plan, compose, develop, create, invent, organise, construct, produce, compile, design, devise</td>
</tr>
<tr>
<td>Evaluate</td>
<td>Rank, assess, monitor, check, test, judge</td>
</tr>
<tr>
<td>Analyze</td>
<td>Analyse, break down, compare, select, contrast, deconstruct, discriminate, distinguish, identify, outline</td>
</tr>
<tr>
<td>Apply</td>
<td>Implement, organise, dramatise, solve, construct, demonstrate, discover, manipulate, modify, operate, predict, prepare, produce, relate, show, solve, choose</td>
</tr>
<tr>
<td>Understand</td>
<td>Illustrate, defend, compare, estimate, explain, classify, generalise, interpret, paraphrase, predict, rewrite, summarise, translate</td>
</tr>
<tr>
<td>Remember</td>
<td>Define, describe, identify, know, label, list, match, name, outline, recall, recognise, reproduce, select, state, locate</td>
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</table>
# Bloom’s Taxonomy (Revised)

## Four Knowledge Domains

<table>
<thead>
<tr>
<th>Knowledge Domain</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factual Knowledge</strong></td>
<td>• Knowledge of terminology</td>
</tr>
<tr>
<td></td>
<td>• Knowledge of specific details and elements</td>
</tr>
<tr>
<td><strong>Conceptual Knowledge</strong></td>
<td>• Subject-specific classifications and categories</td>
</tr>
<tr>
<td></td>
<td>• Subject-specific principles and generalizations</td>
</tr>
<tr>
<td></td>
<td>• Theories, models, structures</td>
</tr>
<tr>
<td><strong>Procedural Knowledge</strong></td>
<td>• Skills and algorithms</td>
</tr>
<tr>
<td></td>
<td>• Techniques and methods</td>
</tr>
<tr>
<td></td>
<td>• Criteria for determining when to use appropriate procedures</td>
</tr>
<tr>
<td><strong>Metacognitive Knowledge</strong></td>
<td>• Strategic knowledge</td>
</tr>
<tr>
<td></td>
<td>• Knowledge about cognitive tasks, including appropriate contextual and</td>
</tr>
<tr>
<td></td>
<td>conditional knowledge</td>
</tr>
<tr>
<td></td>
<td>• Self-knowledge</td>
</tr>
</tbody>
</table>
## Bloom’s Taxonomy (Revised)

<table>
<thead>
<tr>
<th>Four Knowledge Domains</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factual Knowledge</td>
<td>Basic elements used to communicate, understand, organise a subject: terminology, scientific terms, labels, vocabulary, jargon, symbols or representations; and specific details such as knowledge of events, people, dates, sources of information</td>
</tr>
<tr>
<td>Conceptual Knowledge</td>
<td>Knowledge of classifications and categories, principles, theories, models or structures of a subject</td>
</tr>
<tr>
<td>Procedural Knowledge</td>
<td>Knowing how to do something: performing skills, algorithms, techniques or methods</td>
</tr>
<tr>
<td>Metacognitive Knowledge</td>
<td>The process or strategy of learning and thinking; an awareness of one’s own cognition, and the ability to control, monitor, and regulate one’s own cognitive process</td>
</tr>
</tbody>
</table>
Original to Revised Bloom’s Taxonomy

1.0 Knowledge
- 1.10 Knowledge of specific facts
- 1.11 Knowledge of terminology
- 1.12 Knowledge of ways and means of dealing with specifics

2.0 Comprehension
- 2.1 Translation
- 2.2 Interpretation
- 2.3 Extrapolation

3.0 Application

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- 6.1 Evaluation in terms of internal evidence
- 6.2 Judgments in terms of external criteria
Structural Changes
From a 1D Hierarchy to a 2D Table

http://oregonstate.edu/instruct/coursedev/models/id/taxonomy/#table
Changes in Emphasis

“more authentic tool for curriculum planning, instructional delivery, and assessment”

<table>
<thead>
<tr>
<th>Levels</th>
<th>Remember</th>
<th>Understand</th>
<th>Apply</th>
<th>Analyse</th>
<th>Evaluate</th>
<th>Create</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factual Knowledge</td>
<td>ELO1/ Test A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ELO4/ Project</td>
</tr>
<tr>
<td>Conceptual Knowledge</td>
<td></td>
<td>ELO2/ Test A</td>
<td></td>
<td></td>
<td></td>
<td>ELO4/ Project</td>
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<tr>
<td>Procedural Knowledge</td>
<td></td>
<td></td>
<td></td>
<td>ELO3/ Learning Activity 1/ Journal</td>
<td></td>
<td></td>
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<tr>
<td>Meta-cognitive Knowledge</td>
<td></td>
<td></td>
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QA at Programme Level
Aligning Stakeholders’ Needs to Learning Outcomes

Vertical Alignment of Learning Outcomes and Stakeholders’ Needs
## Aligning Learning Outcomes to Stakeholders’ Needs

<table>
<thead>
<tr>
<th>LOs</th>
<th>University</th>
<th>MOE</th>
<th>Industry</th>
<th>ABET</th>
<th>ETC.</th>
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<tr>
<td>1</td>
<td>F</td>
<td>F</td>
<td>M</td>
<td>F</td>
<td>?</td>
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<tr>
<td>2</td>
<td></td>
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<td>M</td>
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<td>F</td>
<td>F</td>
<td>F</td>
<td>F</td>
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</tr>
<tr>
<td>4</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td>P</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>6</td>
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<tr>
<td>8</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>?</td>
</tr>
</tbody>
</table>

*F – Fully fulfilled
*M – Moderately fulfilled
*P – Partially fulfilled*
## Aligning Programme Learning Outcomes to Graduate Profile

<table>
<thead>
<tr>
<th>Graduate Profile/Competences</th>
<th>LO1</th>
<th>LO2</th>
<th>LO3</th>
<th>LO4</th>
<th>LO5</th>
<th>LO6</th>
<th>LO7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> A strong fundamental chemical engineering knowledge and the ability to apply and integrate knowledge to identify, formulate and solve problems of chemical engineering fields</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.</strong> 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</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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<tr>
<td><strong>3.</strong> The ability to engage in life-long learning by acquiring new skills and to remain relevant in today’s fast changing environment</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
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Source: Chemical Engineering, Universitas Indonesia
## Aligning Course LO to Programme LO

Table 1.2 Relationship between Courses and Expected Learning Outcomes (Continued)

<table>
<thead>
<tr>
<th>No</th>
<th>Code</th>
<th>Course</th>
<th>Credit</th>
<th>ELO1</th>
<th>ELO2</th>
<th>ELO3</th>
<th>ELO4</th>
<th>ELO5</th>
<th>ELO6</th>
<th>ELO7</th>
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<td>27</td>
<td>CHS220802</td>
<td>Analytical Chemistry Lab.</td>
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<td>5</td>
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<td>1</td>
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<tr>
<td>28</td>
<td>CHS210801</td>
<td>Mass and Energy Balance</td>
<td>3</td>
<td>5</td>
<td>5</td>
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<td>29</td>
<td>CHS210802</td>
<td>Transport Phenomena</td>
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<td>5</td>
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<td>CHS220804</td>
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<td>CHS310802</td>
<td>Mass Transfer</td>
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<td>Unit Operation Lab. 1</td>
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<td>Unit Operation Lab. 2</td>
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Note: The figures in the ELO column relate to:

1. Not directly related to ELO
2. Quite related to ELO
3. Related to ELO
4. Closely related to ELO
5. Specifically related to ELO
Constructive Alignment in Curriculum Design

Source: Lori W. Anderson, “Curricular Alignment: a Re-Examination
Kurikulum
Curriculum Development

Improvement → Stakeholders’ Needs

Standardisation → Feedback/ Evaluation

Results & Analysis → Assessment

©Education Quality International

Plan → Purpose

Action → Check

Graduate Competencies → Learning Outcomes

Curriculum → Learning & Teaching

QA at Programme Level
Hal yang perlu diperhatikan dalam penyusunan kurikulum PT

- 3.-Panduan-KPT-2016-endro.compressed.pdf
Programme & Course 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.
2. Programme Specification

Programme specification is a set of documents that describes the study programme offered by the university. The programme specification usually encompasses the following items:

- a summary of programme aims and intended outcomes;
- an outline of the course structure;
- a matrix showing how the programme learning outcomes are achieved through the courses; and
- a set of course specifications

Appendices 2a to 2c: Samples of Programme & Course Specifications
2. Programme Specification

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
2. Programme Specification

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.
Programme Structure & 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.
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.
Curriculum Mapping

<table>
<thead>
<tr>
<th>Admission Requirements</th>
<th>Study Programme Design</th>
<th>Qualifications of study programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>What kind of knowledge and/or which qualifications are the students expected to bring along?</td>
<td>CU 1  CU 2  CU 3  CU 4  CU 5  CU 6  CU 7  CU 8  CU 9  CU 10  CU 11  CU 12  CU 13  Bachelor-Thesis</td>
<td>Which qualifications is the programme aiming at? What are the students be able to know and to do after completing the programme? What is our unique selling proposition?</td>
</tr>
</tbody>
</table>

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S. Ruschin | Center for Higher Education and Quality Assurance (ZfH)
Curriculum Mapping

Algonquin College Practical Nursing Program Map
2008/2009

Legend
- Level 1 Nursing
- Level 2 Nursing
- Level 3 Nursing
- Level 4 Nursing
- Sciences
- English

QA at Programme Level

1. Practise in a professional manner within a legislative and ethical framework.
2. Develop and sustain therapeutic relationships with clients.
3. Communicate effectively with clients, health care team members, and others.
4. Participate effectively as a team member to support clients' achievement of their expected health outcomes.
5. Integrate theory, principles, and concepts into competent nursing practice.
6. Complete assessments in a holistic, comprehensive, and analytical manner.
7. Prioritize and organize nursing and health care.
8. Implement and evaluate nursing interventions competently.
9. Use a variety of technological tools to support clients' achievement of their expected health outcomes.
Curriculum Mapping

Figure 2.2 Curriculum Structure of ChESP

Source: Chemical Engineering, Universitas Indonesia
Contoh kurikulum Bachelor of Economy

- Appendix 2a - Programme Specification ba-economics UL.pdf
Terima kasih