

The Curtin Graduate Employability Quality Model

About Curtin

Curtin University of Technology is Western Australia's largest university with over 31,000 students, nearly 11,000 of whom are offshore and onshore international students, as well as nearly 1000 research students. Curtin's programs centre around the provision of knowledge and skills to meet industry and workplace standards.

Curtin's Graduate Employability Quality Model

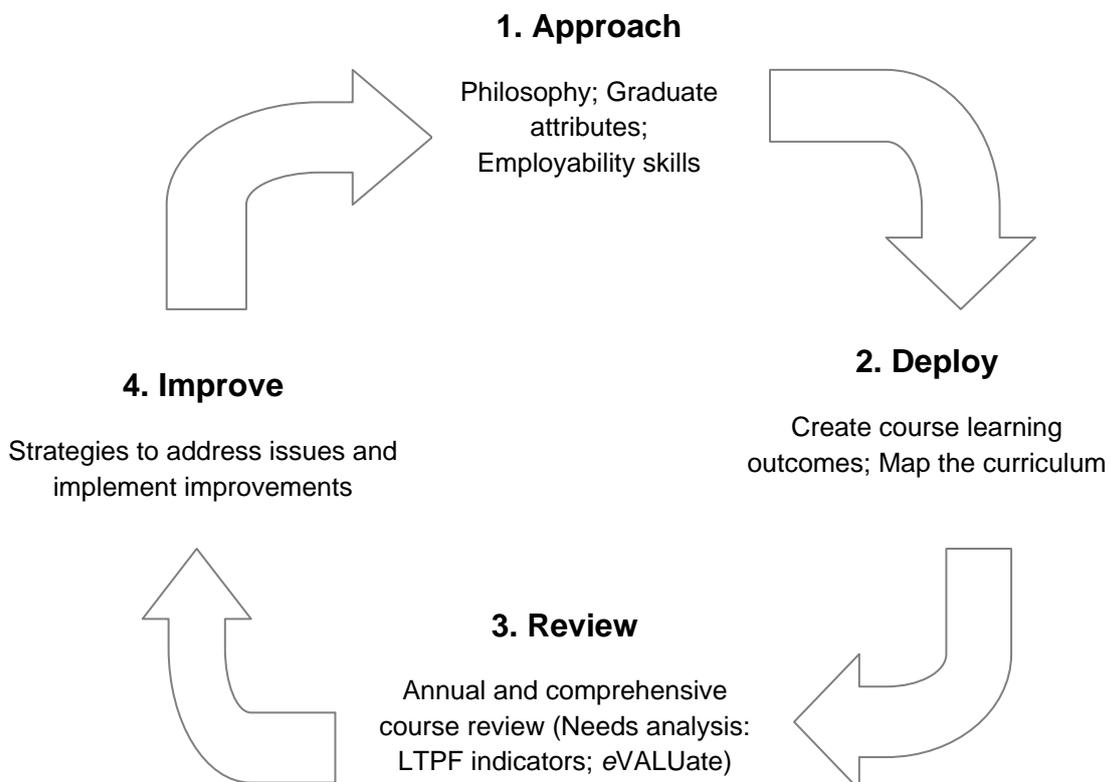
The tools and stages used for course improvement at Curtin, with special attention to **achieving graduate employability**, are described here in terms of an ADRI framework:

A = Approach (mission, vision and values)

D = Deployment (how we are going to deploy)

R = Review (how have we gone, what do we need to modify, closing the feedback loop)

I = Improvement (what improvements do we need to make).



1. Approach: Curtin's philosophy on excellence in teaching and learning and its Graduate Attributes

At Curtin, **excellent learning and teaching** is founded on and aspires to:

- Student learning through an outcomes-focused approach;
- Flexibility and innovation;
- Creative and appropriate applications of technology;
- Appreciation of cultural diversity; and
- Research-based pedagogical practices.

Curtin students' learning experiences include:

- Intellectually challenging learning outcomes;
- Engaging learning environments;
- Flexible learning opportunities;
- Assessment which aligns with learning outcomes; and
- Systematic evaluation of teaching and learning.

Within the Curtin learning partnership, staff and students:

- Pursue expertise and innovation in their disciplines;
- Are self-directed, motivated and active learners;
- Demonstrate exemplary learning and teaching practices;
- Reflect on improving learning and teaching practices; and
- Work within Curtin's Guiding Ethical Principles.

Curtin graduates demonstrate evidence, as appropriate to their disciplines, that they can:

	Brief description
1. Apply discipline knowledge, principles and concepts	Apply discipline knowledge, understand its theoretical underpinnings, and ways of thinking; Extend the boundaries of knowledge through research.
2. Think critically, creatively and reflectively	Apply logical and rational processes to analyse the components of an issue; Think creatively to generate innovative solutions.
3. Access, evaluate and synthesise information	Decide what information is needed and where it might be found using appropriate technologies; Make valid judgements and synthesise information from a range of sources.
4. Communicate effectively	Communicate in ways appropriate to the discipline, audience and purpose
5. Use technologies appropriately	Use appropriate technologies recognising their advantages and limitations.
6. Utilise lifelong learning skills	Use a range of learning strategies; Take responsibility for one's own learning and development; Sustain intellectual curiosity; know how to continue to learn as a graduate.
7 International perspective	Think globally and consider issues from a variety of perspectives; Apply international standards and practices within a discipline or professional area.
8. Cultural understanding	Respect individual human rights; Recognise the importance of cultural diversity particularly the perspective of indigenous Australians; Value diversity of language.
9. Apply professional skills	Work independently and in teams; Demonstrate leadership, professional behaviour and ethical practices

Frame of Reference: The Employability Skills Framework and Curtin's Graduate Attributes

Employability skills definition: Skills required not only to gain employment but also to progress within an enterprise so as to achieve one's potential and contribute successfully to enterprise strategic directions. Employability skills are sometimes referred to as generic skills or capabilities or key competencies.

Personal attributes that contribute to overall employability:	Loyalty An ability to deal with pressure A sense of humour	Personal presentation Honesty and integrity Adaptability	A balanced attitude to work and home life Positive self esteem Reliability	Commitment Motivation	Common sense Enthusiasm
Skill	Element (i.e. facets of the skill that employer identified as important noting that the mix and priority of these would vary from job to job)			Overall best fit with Curtin's Graduate Attributes	
1. Communication that contributes to productive and harmonious relations across employees and customers	Listening and understanding Speaking clearly and directly Writing to the needs of the audience Negotiating responsibly Reading independently Empathising Speaking and writing in languages other than English Using numeracy Understanding the needs of internal and external customers Persuading effectively Establishing and using networks Being assertive Sharing information			4. Communication skills Also: 2. Critical and creative thinking 3. Information skills 9. Professional skills	
2. Teamwork that contributes to productive working relationships and outcomes	Working across different ages and irrespective of gender, race, religion or political persuasion Working as an individual and as a member of a team Knowing how to define a role as part of the team Applying teamwork to a range of situations e.g. futures planning, crisis problem solving Identifying the strengths of the team members Coaching and mentoring skills including giving feedback			9. Professional skills Also: 8. Intercultural understanding 2. Critical and creative thinking	
3. Problem solving that contributes to productive outcomes	Developing creative, innovative solutions Developing practical solutions Showing independence and initiative in identifying problems and solving them Solving problems in teams Applying a range of strategies to problem solving Using mathematics including budgeting and financial management to solve problems Applying problem solving strategies across a range of areas Testing assumptions taking the context of data and circumstances into account Resolving customer concerns in relation to complex projects issues			2. Critical and creative thinking Also: 8. Intercultural understanding 3. Information skills 9. Professional skills	
4. Self-management that contributes to employee satisfaction and growth	Having a personal vision and goals Evaluating and monitoring own performance Having knowledge and confidence in own ideas and visions Articulating own ideas and visions Taking responsibility			6. Lifelong learning Also: 2. Critical and creative thinking 4. Communication skills 9. Professional skills	
5. Planning and organizing that contributes to long and short term strategic planning	Managing time and priorities –setting time lines, coordinating tasks for self and with others Being resourceful Taking initiative and making decisions Adapting resource allocations to cope with contingencies Establishing clear project goals and deliverables Allocating people and other resources to tasks Planning the use of resources including time management Participates in continuous improvement and planning processes Developing a vision and a proactive plan to accompany it Predicting – weighing up risk, evaluate alternatives and apply evaluation criteria Collecting, analysing and organising information Understanding basic business systems and their relationships			6. Lifelong learning Also: 3. Information skills 2. Critical and creative thinking 9. Professional skills	
6. Technology that contributes to effective execution of tasks	Having a range of basic IT skills Applying IT as a management tool Using IT to organise data Being willing to learn new IT skills Having the OHS knowledge to apply technology Having the physical capacity to apply technology e.g. manual dexterity			5. Technology skills Also: 3. Information skills 2. Critical and creative thinking 6. Lifelong learning	
7. Life-long learning that contributes to ongoing improvement and expansion in employee and company operations and outcomes	Managing own learning Contributing to the learning community at the workplace Using a range of mediums to learn – mentoring, peer support and networking, IT, courses Applying learning to 'technical' issues (e.g. learning about products) and 'people' issues (e.g. interpersonal and cultural aspects of work) Having enthusiasm for ongoing learning Being willing to learn in any setting – on and off the job Being open to new ideas and techniques Being prepared to invest time and effort in learning new skills Acknowledging the need to learn in order to accommodate change			6. Lifelong learning Also: 3. Information skills 2. Critical and creative thinking 9. Professional skills	
8. Initiative and enterprise that contribute to innovative outcomes	Adapting to new situations Developing a strategic, creative, long term vision Being creative Identifying opportunities not obvious to others Translating ideas into action Generating a range of options Initiating innovative solutions			2. Critical and creative thinking Also: 9. Professional skills 6. Lifelong learning	

DEST 2002a, *Employability skills for the future*, Department of Education, Science and Training, Commonwealth of Australia
[http://www.detya.gov.au/ty/publications/employability_skills/final_report.pdf]

2. Deploy: Curriculum Mapping

Mapping course learning outcomes

The table below is an example of curriculum mapping for Curtin's Master in Environmental Health. Note that the map addresses graduate attributes and learning outcomes as they relate to professional competencies.

Table 1: Map course learning outcomes to graduate attributes and professional competencies

Curtin's graduate attributes	Professional competencies (Australian Institute of Environmental Health)	A graduate of the Master of Environmental Health can:
1. Apply discipline knowledge, principles and concepts	Apply basic public health science principles and concepts to issues of concern; understand the discipline of environmental health, its theoretical underpinnings and spheres of operation; use quantitative and qualitative methods for monitoring, assessing and evaluating events	1. Apply sustainable environmental health principles and practices to enhance the health and well-being of populations
2. Think critically, creatively and reflectively	Apply logical and rational processes to analyse the components of an issue; think creatively to generate innovative solutions; undertake systematic problem solving; employ principles of project management	2.1 Apply logical and rational processes to critically analyse issues relevant to environmental health 2.2 Think creatively to generate innovative solutions
3. Access, evaluate and synthesise information	Identify and access information sources and compile relevant and appropriate information when needed; analyse data, recognise meaningful test results, and interpret results; evaluate the effectiveness, performance or results of procedures, interventions and programs	3. Access, evaluate and synthesise relevant information and evidence from a range of sources applicable to practice
4. Communicate effectively	Exchange of information with colleagues, practitioners, clients, policy-makers, interest groups and the public; have appropriate interpersonal skills; facilitate conflict resolution within agencies, community and regulated parties; persuasively argue for the value and importance of environmental and public health	4. Communicate at an advanced level with individuals and groups and advocate for the improvement of health conditions
5. Use technologies appropriately	Learn to use new technologies; decide on appropriate applications, recognising their advantages and limitations	5. Effectively use new and existing technologies relevant to environmental health practice
6. Use lifelong learning skills	Responsible for making change; adapt effectively to change; take responsibility for their own learning and development; critically evaluate personal beliefs and assumptions	6. Take responsibility for own learning and professional development in environmental health practice
7. Recognise and apply international perspectives	Recognise individual and collective human rights; recognise the importance of cultural diversity and sensitivity; think globally	7. Recognise and apply international perspectives to environmental health
8. Demonstrate cultural awareness and understanding	Recognise individual and collective human rights; recognise the importance of cultural diversity and sensitivity; think globally	8. Demonstrate understanding and respect for individual human rights and cultural diversity
9. Apply professional skills	Work independently and in teams; demonstrate leadership; understand and demonstrate professional behaviour; demonstrate ethical practices; employ systems-thinking skills	9.1 Work professionally and ethically across a range of settings 9.2 Demonstrate independence and leadership in project management

Mapping all the units in a course

Table 2: Unit information—an example showing one unit

Credit value and Syllabus from Student One	Unit learning outcomes Successful students in this unit can:	CLO	CLO	Level of thinking	Assessments Students demonstrate achievement of outcomes by	%	ULOs assessed	Learning experiences
XXX 100 (25) Introduction to the nature and sources of law. This unit provides an overview of the structure and institutions of government with a focus on the legislative and judicial process. Key aspects of constitutional, administrative, civil and criminal law as they relate to business are examined.	1. Comprehend and apply the basic legal rules and principles arising in the Australian legal and political system	1	2	**	1. Detailed information here	25%	2,4	A description of the types of learning experiences designed to engage learners.
	2. Analyse and apply a selection of legal rules and principles that govern Australian society and impact on the conduct of business	1	2	***	2. Detailed information here	25%	1,3,4	
	3. Write clear, concise and coherent accounts relating to the political and legal systems of Australia	1	4	*****	3. Detailed information here	50%	1,2,3,4	
	4. Employ problem solving skills and decision making techniques in regard to the political and legal system of Australia	1	3	*****				
Key: CLO = Course learning outcome(s) to which this unit learning outcome most closely relates Level of thinking = Star rating using Bloom's taxonomy ULOs assessed = The unit learning outcomes assessed in each assessment task								

Table 3: Course map showing graduate attributes (course learning outcomes) and level of thinking skill

1. how the collective experience of the unit learning outcomes ensure achievement of the course learning outcomes (ie Curtin's nine graduate attributes), and
2. how the collective experience of the unit learning outcomes challenge students to achieve higher order thinking skills (as defined in Bloom's taxonomy—see Appendix).

Where a unit learning outcome maps to two of the nine course learning outcomes (graduate attributes), that unit learning outcome will appear twice.

This example shows one section of the table only

2. Think critically, creatively and reflectively			
Apply logical and rational processes to analyse the components of an issue; Think creatively to generate innovative solutions.			
CLO	Unit	Unit learning outcome	Think
2	XXX 100	4. Examine which kinds of BIS and IT would be helpful in a particular organisational situation.	***
2	YYY 100	5. Analyse ambiguous problems and recommend solutions	*****
2	ZZZ 100	1. Comprehend and apply the basic legal rules and principles arising in the Australian legal and political system	**
2	ZZZ 100	2. Analyse and apply a selection of legal rules and principles that govern Australian society and impact on the conduct of business	***
2	PQR 100	3. Apply the economic way of thinking to analyse real world events	***

3. Review: Measure progress through needs analysis

Annual Course review OR Comprehensive Course Review (every five years)

Comprehensive Course Review STAGE 1: Review the curriculum

Phase	Interaction between C2010 team and teaching staff	C2010 activity
PHASE 1 Initial request and needs analysis	Course is nominated for review by the Course Coordinator (CC); a Needs Analysis is compiled to determine how the course might change and why (based on course structure, and course trends using internal and external feedback such as eVALUate, CEQ, feedback from employers and industry partners). The Needs Analysis document is used for discussion with CC (and course team if appropriate)—general directions are set. CC informs course team and Head of School that course has been referred to C2010. [This phase typically requires a one hour meeting with the CC.]	On advice from CC, C2010 gathers data and compiles the Needs Analysis.
PHASE 2 Map the existing course	CC sends to C2010 the current course learning outcomes based on Curtin's graduate attributes (if those course learning outcomes exist); the most recent versions of unit outlines for all core units (including service taught units) and selected optional units. CC arranges times for course team meetings (for Phase 3). [This phase typically requires no meetings.]	C2010 uses these materials to create a map of the existing course in preparation for Phase 3.
PHASE 3 Course team considers map of existing course and renews unit information	The course team uses the Needs Analysis and the map of existing course to <ul style="list-style-type: none"> • consider how the course might change • consider how the unit learning outcomes currently relate to the course learning outcomes and prompt higher order thinking skills • revise unit information (alignment of the syllabus, the unit learning outcomes, the assessment tasks and the learning experiences) [This is typically a two hour meeting with the course team.] Outside this meeting, the CC and Head of School engage in dialogue with service teaching providers to negotiate refined learning outcomes and address quality issues.	C2010 uses revised unit information from this meeting to create a map of the renewed course in preparation for Phase 4.
PHASE 4 Consensus on renewed course	The course team uses the map of the renewed course to <ul style="list-style-type: none"> • decide how the course will change to address issues and challenges identified through internal and external feedback • refine revised unit information so that the course learning outcomes are achievable and the level of higher order thinking skills is appropriate • ensure that all unit experiences are designed to engage students to learn effectively. [This is typically a three hour meeting with the course team, but this may take longer depending on the amount of change to be negotiated.]	C2010 makes all refinements to map of the renewed course.
PHASE 5 Course changes approved	CC liaises with C2010 to <ul style="list-style-type: none"> • ensure appropriate migration of existing students, and relations with external providers • prepare for implementation. 	C2010 prepares documentation and facilitates the approval process.

Phase 1 Needs Analysis: After the initial discussion, the C2010 team compiles data from a range of sources into the appendices of the Phase 1 Needs Analysis document. The appendices are:

1. **Appendix 1 Course Demand**
 - a. **Number of 1st Preferences, by school-leaver and non-school leaver**
 - b. **Average Tertiary Entrance Rank (TER) of enrolling students**

2. **Appendix 2 Course Activity**
 - a. **Headcount - Commencing Students - by student type**
 - b. **Headcount - Total - by student type**
 - c. **EFTSL - Commencing Students - by funding category**
 - d. **EFTSL - Total students - by funding category and by location**
 - e. **Headcount - Course Completions - by student type**
3. **Appendix 3 Course Teaching and Learning - Student Performance**
 - a. **First Year Retention rate (only courses with ≥ 20 enrolments)**
 - b. **Course Annual Retention rate (only courses with ≥ 20 enrolments)**
 - c. **Course Student Load Pass rate**
4. **Appendix 4 Course Teaching and Learning - Graduate Course Experience**
 - a. **Good Teaching Scale (GTS)**
 - b. **Generic Skills Scale (GSS)**
 - c. **Clear Goals and Standards (CGS)**
 - d. **Overall Satisfaction Index (OSI)**
5. **Appendix 5 Graduate Outcomes**
 - a. **Number of total course completions**
 - b. **Number of domestic and international onshore course completions**
 - c. **Number of survey respondents**
 - d. **Percentage of students employed full time after graduation**
 - e. **Percentage of students employed part time after graduation**
 - f. **Percentage of students undertaking further study**
6. **Appendix 6 Feedback from current students**
 - a. **eVALUate Course Summary Reports (quantitative data) and qualitative data (CEQuery analysis of comments) from all eVALUate events since semester 2, 2005.**
7. **Appendix 7 Feedback from recent graduates**
 - a. **eVALUate Graduate Report (quantitative data) and qualitative data (CEQuery analysis of comments) from graduates from the last five years**
8. **Appendix 8 Feedback from employers and industry**
 - a. **eVALUate Employer Report (quantitative data) and qualitative data (CEQuery analysis of comments)**
9. **Appendix 9 Feedback from delivery agencies**
 - a. **Verbatim comments from delivery agencies such as Centre for Regional Education, Curtin International College, Curtin Sydney, Curtin Sarawak and offshore teaching partners**
10. **Appendix 10 CEQ Benchmarking data showing how this course or discipline rates nationally in CEQ results**
11. **Appendix 11 Course structure report (if appropriate) showing how the structure of this course might be optimised.**

4. Improve: Comprehensive Course Review

STAGE 2: Implement the reviewed curriculum

The renewed curriculum sets in motion several tasks which depend on careful and monitored implementation if students are to have an improved experience on the course. All students, staff and external stakeholders must clearly understand the aims and outcomes of the course. Students need clear, consistent and robust information in every unit. Learning experiences (lectures, seminars, workshops) must be engaging and of consistently high quality. Learning resources (handouts, data presentation, websites) must be engaging and of consistently high quality. C2010 assists course teams to

- 1. Produce a course outline**
- 2. Revise all unit outlines in a consistent, policy-compliant format (with assistance from the Library to ensure readings are current and available on e-Reserve)**
- 3. Assist teaching staff to improve learning experiences and resources (eg consultation on teaching practice, assessment, feedback, student engagement; improving handouts, PowerPoint files, websites, iLectures)**
- 4. Communicate the changes to all stakeholders including students, staff (including sessional staff) and external stakeholders.**

Appendix: The Graduate Employability Skills Report

Report prepared for the Business, Industry and Higher Education Collaboration Council August 2007

<http://www.dest.gov.au/highered/bihecc>

Main sections:

Identifying employability skills

Graduate attributes are determined at a university level and then identified at a faculty, discipline, qualification and subject level through a range of approaches including consultations with employers, students and professional bodies. Some universities have taken highly structured approaches to mapping graduate attributes across curriculum to ensure that these attributes can be readily seen across an entire program or qualification. This enables the identification of gaps and alignment of graduate attributes with discipline-specific content.

Developing employability skills

Universities work to develop employability skills in their students by providing academic staff with relevant support and resources, integrating these skills into curriculum and course design, providing students with work placements and exposure to professional settings and providing advice and guidance through career services. Furthermore, universities offer students opportunities for developing themselves through participation in clubs and societies and university life. Fieldwork, industry-based learning, sandwich years, cooperative education, work placements and internships, commonly called Work Integrated Learning (WIL) programs, are all methods universities have used to equip students with knowledge of current workplace practices.

Assessing employability skills

Employability skills can be effectively assessed where the specific skill and its application is described in course materials and learning objectives, and where it is clearly located within the context of a given discipline. Workplace supervisors for WIL programs are in a unique position to assess and provide feedback on a student's employability skills. Ultimately though, it is employers who assess a graduate's employability skills.

Reporting on employability skills

E-portfolios were seen by business and universities to be a practical method for graduates to explain and provide examples of their employability skills. The Diploma Supplement - although most of the information on the Diploma Supplement is standard there is a section where details of employability skills associated with the given qualification could be readily and meaningfully included.

Graduate Attributes

Graduate attributes may be defined as the qualities, skills and understandings a university community agrees its students should develop during their time with the university'. (Bowden et al. 2002). Since 1998, all Australian universities have been required to develop policy statements which specify their generic graduate attributes as part of funding and reporting arrangements with the Department of Education, Science and Training. These policies specify the generic attributes of their graduates irrespective of the discipline which forms the basis of their qualification. Graduate attributes are not discipline-specific, but are intended to reflect broader aspirational, social, ethical or humanitarian characteristics that a society desires of its university graduates. Most universities have addressed the importance of employability skills through their graduates' attributes.