
THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA
Course Design
Handbook
CTL
CENTRE FOR TEACHING AND LEARNING

INTRODUCTION

CONTENTS

Course Design @ UON 3
Preliminary Analysis 4
Preliminary analysis: situating the course design 5
Philosophical approaches to course design 7
Designing Learning Outcomes 8
Learning outcomes 9
Questions for formulating significant learning goals 18
Current learning outcomes 19
Developing learning outcomes 21
Assessment 24
Assessment design: Matching tasks with generic learning outcomes 28
Alignment of current assessment tasks 30
Suitability of current assessment tasks 32
Overall review of current assessment tasks 33
FY Assessment 34
FY assessment strategies 36
Alignment of assessment tasks 37
Schedule of assessment tasks 39
Criteria, Standards and Rubrics 41
Criteria and standards 41
Feedback 55
Developing a feedback strategy 54
Course evaluation strategy 57
Feedback strategy 58
Teaching and learning activities 62
Current teaching and learning activities 66
Academic literacies 68
Aligning Teaching and learning activities 69
Evaluation Strategies 74
Course Evaluation strategy 73
Student Feedback on Courses – New Instrument 75
Course evaluation strategy 76
CTL Course Design workshops - an Overview of sessions 79
Contacts 80
References 80

KEY CONCEPTS AND SOURCES

John Biggs is well known as a leading expert on course design in higher education. His influential work includes the development of the SOLO Taxonomy and the principle of constructive alignment. The book *Teaching for quality learning at university* (Biggs & Tang, 2011) was first published in 1999, and remains a critical staple for course designers around the world.

"In constructive alignment, we start with the outcomes we intend students to learn, and align teaching and assessment to those outcomes. The outcome statements contain a learning activity, a verb, that students need to perform to best achieve the outcome, such as "APPLY expectancy-value theory of motivation", OR "EXPLAIN the concept of … ". That verb says what the relevant learning activities are that the students need to undertake in order to attain the intended learning outcome. Learning is constructed by what activities the students carry out; learning is about what they do, not about what we teachers do. Likewise, assessment is about how well they achieve the intended outcomes, not about how well they report back to us what we have told them. The SOLO Taxonomy helps to map levels of understanding that can be built into the intended learning outcomes and to create the assessment criteria or rubrics. Constructive alignment can be used for individual courses, for degree programmes, and at the institutional level, for aligning all teaching to graduate attributes." (http://www.johnbiggs.com.au/constructive_alignment.html)

L. Dee Fink's book *Creating significant learning experiences: An integrated approach to designing college courses* (2003) is also a popular guide for course designers. In it, we are introduced to his Taxonomy of Significant Learning, and to his approach to integrated course design.

> "This model builds on and incorporates many ideas that already exist in the published literature on instructional design and good teaching. But I have presented these ideas in a new way that will make it easier for teachers and instructional designers to see what they can actually do – and have students do – to promote such things as significant learning, active learning, and educative assessment … [T]he model also shows the real power of these ideas will come only when they are properly linked with each other." (Fink, 2003, p. xiii)

Susan Toohey's *Designing courses for higher education* (1999) offers us more advice on course design, particularly in terms of the development of intended learning outcomes, which she firmly bases on key educational theories about the nature if knowledge and learning. Toohey also explores the impact of beliefs, values and ideologies on course design.

> "Much of the creativity and power in teaching lies in the design of the curriculum: the choice of texts and ideas which become the focus of study, the planning of experiences for students and the means by which achievement is assessed. These define the boundaries of the experience for students … Willingness to explore beliefs and values held by academic colleagues, students and other stakeholders is important if the curriculum is to achieve and coherence. Clear purpose acts as a guiding principle in the many choices to be made." (Toohey, 1999, pp. 1-2)"

Our fundamental understanding is that student learning is the heart of our business. Biggs & Tang, and Fink form the foundations of our approach, which we build upon using a range of key literature in the field, to form a sound framework for course designers @ UON.

PRELIMINARY ANALYSIS



PRELIMINARY ANALYSIS: SITUATING THE COURSE DESIGN

An evaluation sheet for course designers

SITUATIONAL FACTORS ANALYSIS (FINK, 2003)

1. SPECIFIC CONTEXT OF THE TEACHING/LEARNING SITUATION

How many students are in the class? Is the course lower division, upper division, or graduate level? How long and frequent are the class meetings? How will the course be delivered: live, online, or in a classroom or lab? What physical elements of the learning environment will affect the class?

2. GENERAL CONTEXT OF THE LEARNING SITUATION

What learning expectations are placed on this course or curriculum by: the university, college and/or department? the profession? society? (Consider accreditation requirements graduate program attributes, discipline threshold learning outcomes, and academic literacies here.)

3. NATURE OF THE SUBJECT

Is this subject primarily theoretical, practical, or a combination? Is the subject primarily convergent or divergent? Are there important changes or controversies occurring within the field? (Refer to the summary on philosophical approaches to course design, provided.)

4. CHARACTERISTICS OF THE LEARNERS

What is the life situation of the learners (e.g., working, family, professional goals)? What prior knowledge, experiences, and initial feelings do students usually have about this subject? What are their learning goals, expectations, and preferred learning styles?

5. CHARACTERISTICS OF THE TEACHER

What beliefs and values does the teacher have about teaching and learning? What is his/her attitude toward: the subject? students? What level of knowledge or familiarity does s/he have with this subject? What are his/her strengths in teaching?

STUDENT FEEDBACK ANALYSIS

	ITEM	COMMENTS
1	Expectations	
2	Support	
3	Learning activities	
4	Teaching	
5	Structure	
6	Organisation	
7	Resources	
8	Outcomes	
9	Challenge	
10	Assessment	
11	Criteria	
12	Feedback	
13	Relevance	
14	Overall Satisfaction	
15	Effort	

PHILOSOPHICAL APPROACHES TO COURSE DESIGN

An information sheet based on Toohey (1999)

TRADITIONAL OR DISCIPLINE-BASED

Knowledge exists independently
Transmission from teacher to student
Goals as lists of key concepts within the discipline
Assessment is for confirmation of level of achievement and ranking
Lectures and tutorials (difference between lecturer and tutor)

PERFORMANCE- OR SYSTEMS-BASED

Knowledge exists if it is shown
Students follow a planned learning path leading to end point
Content is determined by professional requirements
Assessment provides feedback (diagnostic, formative, summative)
Use of many resources, instructional videos, demonstrations, laboratories

COGNITIVE

Development of the mind, and thinking skills: knowledge is personally constructed
Limited content in depth; questioning; critical thinking
Thinking development is both goal and content
Demonstrations of complex understandings; problem-solving
Group work, interaction and discussion

PERSONAL RELEVANCE/EXPERIENTIAL

Learning personally significant knowledge within the context of the discipline
Teacher is an assistant to student to design and carry out learning plans, facilitator
Learning outcomes able to be applied to a variety of contexts
Learners evaluate own learning (e.g., portfolio work)
Teacher time, individual time, independent work

SOCIALLY CRITICAL

Knowledge is *constructed* by and within historical and cultural frameworks
Like conceptual change model (cognitive approach)
Learning outcomes in terms of level of ability to critique, etc.
Negotiation, collaborative projects
Group work, projects

Designing Learning Outcomes



LEARNING OUTCOMES

A brief guide for courses coordinators

Globally, focus has turned to articulating *learning outcomes* for higher education students. This shift has been happening for over a decade, and has been understood as being 'best practice' in the field of curriculum design for ensuring the quality of courses and programs. However, with the advent of national standards (AQF/TEQSA) and increasing accreditation requirements, articulating learning outcomes for students is now becoming part of the regular work of any teaching academic. Essentially, it involves shifting focus on what a course (or program) might do, to what a student might do as a result of undertaking that course or program.

AT A COURSE LEVEL

There is a conceptual, and thus semantic, difference between *course objectives* and *learning outcomes*. The first articulate the intention of the course itself, while the second state the knowledge, skills and understanding students will achieve as a result of the course. While many may brush aside this difference as trivial, more than enough evidence suggests that it is not.

COURSE OBJECTIVES are what you will present in the course – class and reading content, direction and intention of a course.

LEARNING OUTCOMES are concerned with the achievement of the learner: the skills and knowledge that your students will acquire through attending classes and through completing all set tasks. Student learning outcomes summarise what they will know, understand and be able to demonstrate as a result of the course. These may include dispositions.

AT A PROGRAM LEVEL

Course learning outcomes should be focused on achieving the broader, program-level graduate attributes, accreditation Gas and discipline-specific threshold learning outcomes (if they exist). You should be able to directly link these in a mapping exercise. This mapping exercise is an essential feature of the demonstration of proof that a program, in its entirety, prepares graduates at a standard it claims. It involves reviewing the stated learning outcomes against the learning and assessment activities and program goals to ensure that it is clear how students develop the discipline's desired knowledge, skills and dispositions.

HOW DO I CHANGE MY PROGRAM OR COURSE OBJECTIVES TO LEARNING OUTCOMES?

THE SHORT ANSWER is to complete one of the following statements:

> *At the end of this course, students should be able to …*
> *On successful completion of this course, students will be able to …*

By using such a stem, the focus is turned to the student and what they will be able to do.
HOWEVER, there are some key 'rules' to follow in doing so. These are listed and elaborated upon, below.

DEMONSTRATION THROUGH ASSESSMENT

Learning outcomes need to be linked to assessment items in the course or program (depending on the level of your focus). After all, this is how you will be assessing whether or not students have achieved what you have intended for them. Think about the tasks you have set – what are the students actually *doing*?
This is a good point to check whether or not the students are doing something they need not, or vice versa. You can complete a simple mapping table to help.

DEMONSTRATION MEANS DOING, AND DOING IS ARTICULATED AS A VERB

In completing the statements above, the next word really needs to be a verb. Choosing the best verb requires a bit of thought.

Is 'understand' a good verb? No, it's not, for the simple reason that it is too ambiguous. If your students understand something, how will they be *showing* you that understanding? It's far more accurate to say what that is.

How about 'demonstrate understanding'? Again, this is not a good choice of words. You may as well say what they will be doing in order to demonstrate that understanding. It will be a more accurate statement, and measureable.

Is 'appreciate' a good verb? No. Appreciation is not measurable and can be easily fudged. Just because you articulate an appreciation of the place of mathematics in the real world as you teach, this does not mean your students will appreciate it. We all have different motivations and dispositions. There is a fundamental difference between what you *hope* students will do, and what they *will* do. Stick to things you can control. How about 'demonstrate an appreciation' … ? No.

LEVEL

Depending on what you are teaching, and when, students will be able to perform at a variety of levels. It is not strictly accurate to argue that students, throughout the life of a degree program will work from low-order to high-order skills, although it is accurate to say that they will be building on former skills (knowledge and understanding) as they progress. High-order skills should be considered in any course whether it is first year or post-graduate, otherwise they will be too basic for students, and not engage them in deep learning, but the type of skills will be dependent upon the level of that course within the program. Skill level decisions are *relative* in nature, and need to take into account where the students have come from and where they are headed.
Who are your students, and what do they need to learn?

FROM THE LITERATURE

Toohey (1999, Chapter 7) lists characteristics of effective learning objectives/goals. They:

- are meaningful, not trivial;
- place the development of the learner and the learner's skills within the context of the subject/discipline;
- consider what students should be able to do (or demonstrate they can do);
- allow for the development of new skills or betterment of existing skills; and,
- are memorable, and kept low in number.

SOME EXAMPLES

CHANGING FROM COURSE OBJECTIVES

Old version
The objective of this course is to:

1. introduce the wider context of professional engineering: at one level dealing with the interplay between the professions, industry and the community; and at another level, with the interplay between analysis, synthesis, and management processes.
2. provide a rationale and foundation for future subjects in engineering and engineering management through group projects involving problem based learning.

New version
At the end of this course, students should be able to:

1. explain and appropriately apply the general engineering method of problem solving;
2. explain and apply the concept of "the triple bottom line" (economic, social and environmental factors) to evaluate potential engineering solutions;
3. apply the engineering code of ethics in the context of engineering practice;
4. apply basic project management concepts and tools to a design project;
5. work effectively as part of a team;
6. communicate effectively in both written and oral form, including using the appropriate academic conventions of the discipline.

IMPROVING CURRENT LEARNING OUTCOMES

1

Current version
A student successfully completing this course will have:

1. an understanding of the nature of the real number system, through well-founded skills
2. skills in algebra and an understanding of how these are based on properties of number systems
3. an appreciation of the applicability of mathematical theory and skills
4. knowledge of the role coordinate geometry plays in linking algebra and geometry.

Suggested version
On satisfactory completion of this course, the student will be able to:

1. explain the key defining features of the Real number system
2. apply algebraic methods using the properties of number systems
3. apply a variety of mathematical theories and skills to the solution of real-world problems
4. create meaningful links between algebra and geometry by applying key principles of coordinate geometry.

2

Current version
On satisfactory completion of the course the student will:

1. be able to read, interpret and write some basic mathematical notation
2. be able to recognise and/or construct examples of mathematical objects introduced during the course, such as sets and functions
3. have been introduced to several mathematical models, (e.g. propositional logic, trees) including some of those underlying computing and information technology
4. have had the opportunity to develop capacity in knowing what constitutes a valid argument, and in constructing valid arguments/proofs
5. have had opportunity to develop problem solving skills; and been introduced to ways of thinking useful for simplifying complex situations.

Suggested version:
On satisfactory completion of the course the student will be able to:

1. read interpret and write some basic mathematical notation
2. recognise and construct examples of mathematical objects introduced during the course, such as sets and functions
3. apply several mathematical models, (e.g. propositional logic, trees) including some of those underlying computing and information technology
4. evaluate and construct arguments and proofs that are valid
   effectively apply problem solving skills.

Key differences:

- All statements are focused on what the students will be able to do on successful completion of the course, rather than what the course will do (passive → active);
- Unmeasurable goals have been changed;
- Some statements have been simplified;
- The expectations are high and positive, yet the level remains appropriate.

CLASSIC DON'TS! BY EXAMPLE

At the end of this course students will be able to …

OUTCOME	COMMENT	BETTER	COMMENT
… gain experience in applying the quadratic formula to the solution of problems.	This is more about what the course offers, and reads more like a tutorial activity than an outcome. Gaining experience does not necessarily imply learning. This is not measureable.	… apply the quadratic formula in order to solve problems.	This clearly states what the students will do, is measureable, and informs the task design. This can be at a level appropriate to 1st or 3rd year students, depending on the problems and their complexity.
… discuss the elements of course design.	This is more like a learning activity, not an outcome, and is too broad/vague. Any unenlightened person can 'discuss' anything! This is not measureable, nor does it clearly relate to the development of new skills.	… explain how the various elements of course design contribute to students' learning.	This is more in line with the intention of the course. It is meaningful, assumes development, and is measureable. Any task associated with this outcome, will require students to "explain…" If that is not what I want students to be able to do, then I can change the verb. This is probably a low-level outcome. A higher level outcome would ask students to design those elements.
… understand how combustion engines work.	This is too broad! 'Understand' is not exactly measureable.	… name the parts, and explain the function of the parts, of a combustion engine.	This is more explicit and informs the task design. If students can do these things at a level you expect, then they will have achieved this objective of the course. This is probably a low-level outcome (early in a degree). A higher level outcome would probably ask students to design a combustion engine based on this understanding.
… demonstrate their understanding of heat and energy systems.	Ok… but how?	… explain how heat and energy systems work. … compare heat/energy systems with respect to their efficiency. … design an effective heat/energy system for a given brief.	This is much more explicit and informs the task design. It can be low- or high-order, depending on what it is you expect from students.

TOOLS TO GUIDE & INFORM YOU

BLOOM'S TAXONOMY (1956), AND THE REVISED BLOOM'S TAXONOMY (ANDERSON AND KRATHWOHL, 2001)

Three Domains

Cognitive = knowing and understanding things (Bloom, 1956)

Affective = having certain attitudes and dispositions (Krathwhol, Bloom, and Masia, 1964)

Psychomotor = physically performing (Gronlund, 1970; Harrow, 1972; Simpson, 1972)

Choosing the best verbs – Cognitive domain

DEFINITIONS	KNOWLEDGE	COMPREHENS-ION	APPLICATION	ANALYSIS	SYNTHESIS	EVALUATION
Bloom's Definition	Remember previously learned information.	Demonstrate an understanding of the facts.	Apply knowledge to actual situations.	Break down objects or ideas into simpler parts and find evidence to support generalisations.	Compile component ideas into a new whole or propose alternative solutions.	Make and defend judgments based on internal evidence or external criteria.
Verbs	Arrange Define Describe Duplicate Identify Label List Match Memorize Name Order Outline Recognise Relate Recall Repeat Reproduce Select State	Classify Convert Defend Describe Discuss Distinguish Estimate Explain Express Extend Generalise Give example(s) Identify Indicate Infer Locate Paraphrase Predict Recognise Rewrite Review Select Summarise Translate	Apply Change Choose Compute Demonstrate Discover Dramatize Employ Illustrate Interpret Manipulate Modify Operate Practice Predict Prepare Produce Relate Schedule Show Sketch Solve Use Write	Analyse Appraise Breakdown Calculate Categorise Compare Contrast Criticize Diagram Differentiate Discriminate Distinguish Examine Experiment Identify Illustrate Infer Model Outline Point out Question Relate Select Separate Subdivide Test	Arrange Assemble Categorise Collect Combine Comply Compose Construct Create Design Develop Devise Explain Formulate Generate Plan Prepare Rearrange Reconstruct Relate Reorganise Revise Rewrite Set up Summarise Synthesise Tell Write	Appraise Argue Assess Attach Choose Compare Conclude Contrast Defend Describe Discriminate Estimate Evaluate Explain Judge Justify Interpret Relate Predict Rate Select Summarise Support Value

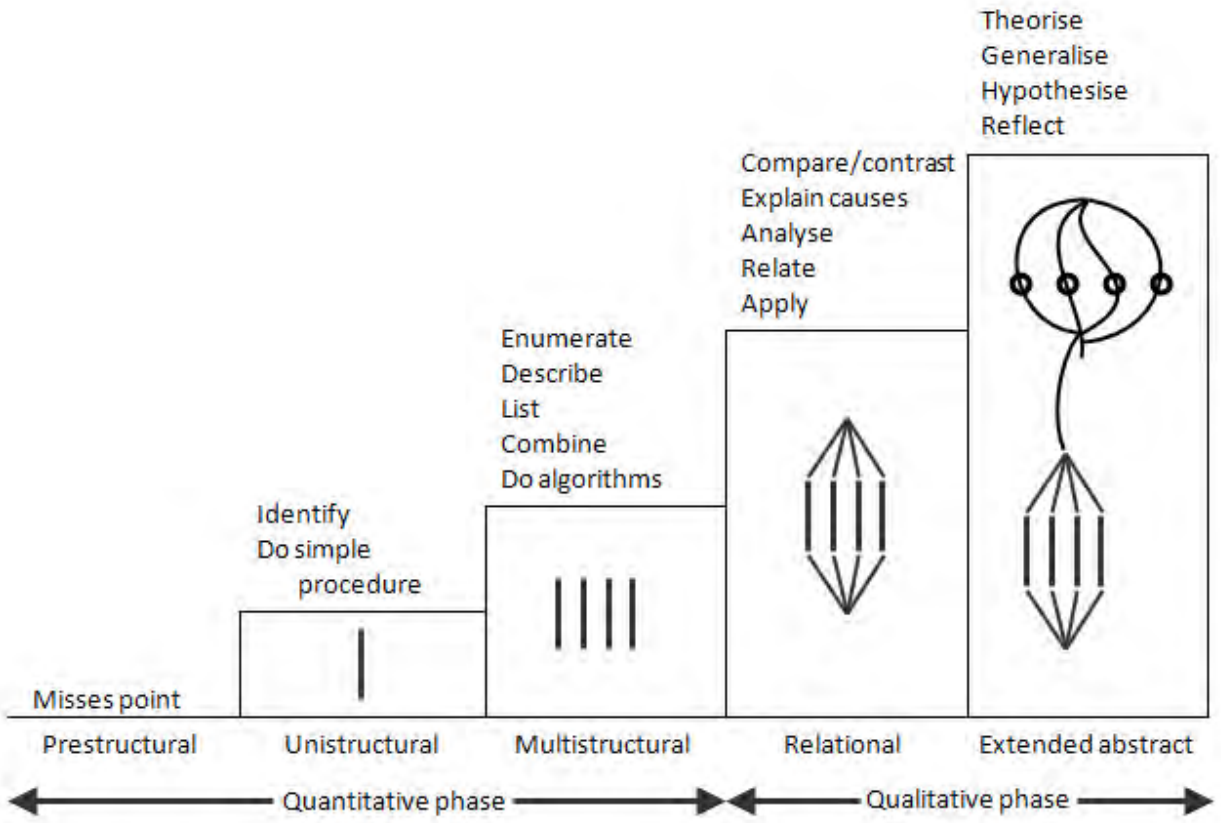
Choosing the best verbs – Affective domain

DEFINITIONS	RECEIVING	RESPONDING	VALUING	ORGANISING	CHARACTERISING
Definition	Students become aware of an attitude, behaviour, or value.	Students exhibit a reaction or change as a result of exposure to an attitude, behaviour, or value.	Students recognise value and display this through involvement or commitment.	Students determine a new value or behaviour as important or a priority.	Students integrate consistent behaviour as a naturalised value in spite of discomfort or cost. The value is recognised as a part of the person's character.
Verbs	Accept Attend Describe Explain Locate Observe Realise Receive Recognise	Behave Comply Cooperate Discuss Examine Follow Model Present Respond Show Study	Accept Adapt Balance Choose Differentiate Defend Influence Prefer Recognise Seek Value	Adapt Adjust Alter Change Customise Develop Improve Manipulate Modify Practice Revise	Authenticate Characterise Defend Display Embody Habituate Internalise Produce Represent Validate Verify

Choosing the best verbs – Psychomotor domain

DEFINITIONS	OBSERVE	MODEL	RECOSGNISE STANDARDS	CORRECT	APPLY	COACH
Definition	Students translate sensory input into physical tasks or activities.	Students are able to replicate a fundamental skill or task.	Students recognise standards or criteria important to perform a skill or task correctly.	Students use standards to evaluate their own performances and make corrections.	Students apply this skill to real life situations.	Students are able to instruct or train others to perform this skill in other situations.
Verbs	Hear Identify Observe See Smell Taste Touch Watch	Attempt Copy Follow Imitate Mimic Model Re-enact Repeat Reproduce Show Try	Check Detect Discriminate Differentiate Distinguish Notice Perceive Recognise Select	Adapt Adjust Alter Change Correct Customise Develop Improve Manipulate Modify Practice Revise	Build Compose Construct Create Design Originate Produce	Demonstrate Exhibit Illustrate Instruct Teach Train

SOLO TAXONOMY (BIGGS, 1999)



"As learning progresses it becomes more complex. SOLO, which stands for the Structure of the Observed Learning Outcome, is a means of classifying learning outcomes in terms of their complexity, enabling us to assess students' work in terms of its quality not of how many bits of this and of that they got right. At first we pick up only one or few aspects of the task (unistructural), then several aspects but they are unrelated (multistructural), then we learn how to integrate them into a whole (relational), and finally, we are able to generalised that whole to as yet untaught applications (extended abstract). The diagram lists verbs typical of each such level.

SOLO can be used not only in assessment, but in designing the curriculum in terms of the learning outcomes intended, which is helpful in implementing constructive alignment. SOLO can also explain why those who use low complexity arguments in political or marital disputes usually win – in the short term. But in politics that's all you need." (http://www.johnbiggs.com.au/solo_taxonomy.html)

FINK'S TAXONOMY OF SIGNIFICANT LEARNING (FINK, 2003)

"There is no question about the value of what Bloom and his associates accomplished by creating this taxonomy. Any model that commands this kind of respect half a century later is extraordinary. However, individuals and organizations involved in higher education are expressing a need for important kinds of learning that do not emerge easily from the Bloom taxonomy, for example: learning how to learn, leadership -and interpersonal skills, ethics, communication skills, character, tolerance, the ability to adapt to change, etc. My interpretation of these statements is that they are expressing a need for new kinds of learning, kinds that go well beyond the cognitive domain of Bloom's taxonomy and even beyond cognitive learning itself. This suggests that the time may have arrived when we need a new and broader taxonomy of significant learning." (Fink, n.d., p.2)

QUESTIONS FOR FORMULATING SIGNIFICANT LEARNING GOALS

Fink (2004, p. 11-12)

"A YEAR (OR MORE) AFTER THIS COURSE IS OVER, I WANT AND HOPE THAT STUDENTS WILL …"

FOUNDATIONAL KNOWLEDGE

What key information (e.g., facts, terms, formulae, concepts, principles, relationships, etc.) is/are important for students to understand and remember in the future?
What key ideas (or perspectives) are important for students to understand in this course?

APPLICATION GOALS

What kinds of thinking are important for students to learn?

- Critical thinking, in which students analyze and evaluate
- Creative thinking, in which students imagine and create
- Practical thinking, in which students solve problems and make decisions

What important skills do students need to gain?
Do students need to learn how to manage complex projects?

INTEGRATION GOALS

What connections (similarities and interactions) should students recognize and make…:

- Among ideas within this course?
- Among the information, ideas, and perspectives in this course and those in courses or areas?
- Among material in this course and the students' own personal, social, and/or work life?

HUMAN DIMENSIONS GOALS

What could or should students learn about themselves?
What could or should students learn about understanding others and/or interacting them?

CARING GOALS

• What changes/values do you hope students will adopt?
Feelings?
Interests?
Ideas?

"LEARNING-HOW-TO-LEARN" GOALS

What would you like for students to learn about:

- how to be good students in a course like this?
- how to learn about this particular subject?
- how to become a self-directed learner of this subject, i.e., having a learning agenda of what they need/want to learn, and a plan for learning it?

CURRENT LEARNING OUTCOMES

An evaluation sheet for course designers

OUTCOME	STUDENT CENTRED?	DEMONSTRABLE?	MEASUREABLE?	ACHIEVABLE?	CLEAR?	MEANINGFUL?	RELEVANT?
At the end of this _____, students will be able to …	Is the LO focused on what the students will be able to do at the end of the _____?	Are you able to witness evidence of achievement of this LO?	Are you able to measure how well students are doing this? Are you able to grade this?	Who are your students? Are they capable of achieving this outcome?	Is the LO clear about what students will be able to do?	Is the LO meaningful, or is it trivial?	Is the LO able to be clearly mapped to course/program/ discipline outcomes?
1							
2							
3							

OUTCOME	STUDENT CENTRED?	DEMONSTRABLE?	MEASUREABLE?	ACHIEVABLE?	CLEAR?	MEANINGFUL?	RELEVANT?
At the end of this _____, students will be able to …	Is the LO focused on what the students will be able to do at the end of the _____?	Are you able to witness evidence of achievement of this LO?	Are you able to measure how well students are doing this? Are you able to grade this?	Who are your students? Are they capable of achieving this outcome?	Is the LO clear about what students will be able to do?	Is the LO meaningful, or is it trivial?	Is the LO able to be clearly mapped to course/program/ discipline outcomes?
4							
5							
6							

NOTES:

STUDENT CENTRED: Learning outcomes express what the *students* will be able to do at the end of a learning session/course/program.
DEMONSTRABLE: Students will have an opportunity to show you that they have achieved this outcome, by *doing* something. Careful use of verbs is important.
MEASUREABLE: You need to be able to *measure* the quality of the students' work in able to assess their learning against the outcome. How do you measure appreciation?
ACHIEVABLE: It needs to be reasonable that students can achieve the outcome in the given time-frame and context. You may need to revise and/or qualify the level of achievement.
CLEAR: Being overly ambiguous does not provide clarity for the teacher or student. try to be clear without being overly specific.
MEANINGFUL: Some outcomes are trivial in context, and may go without saying. Get rid of these, or amend another to address them.
RELEVANT: If the outcome does not go some way towards meeting those at a higher level (e.g. course, program, discipline area), it is not relevant.

DEVELOPING LEARNING OUTCOMES

For lectures/tutorials, modules, courses & programs

A SERIES OF KEY QUESTIONS…

WHO ARE YOUR STUDENTS?

WHAT DO YOU WANT YOUR STUDENTS TO BE ABLE TO DO AS A RESULT OF SUCCESSFULLY COMPLETING YOUR CLASS/COURSE/PROGRAM?

AT WHAT LEVEL DO YOU WANT/NEED THE STUDENTS TO ACHIEVE THIS OUTCOME?

HOW WILL YOU BE ABLE TO SEE WHETHER OR NOT THE STUDENTS HAVE ACHIEVED THIS OUTCOME?

HOW WILL YOU BE ABLE TO MEASURE HOW WELL THEY HAVE ACHIEVED THIS OUTCOME?

HOW DOES YOUR OUTCOME CONTRIBUTE TO THE COURSE/PROGRAM/DISCIPLINE OUTCOMES (GENERIC SKILLS, GRADUATE ATTRIBUTES, DISCIPLINE-SPECIFIC THRESHOLD LEARNING OUTCOMES, OR ACCREDITATION REQUIREMENTS)?

AT THE END OF THIS _____, STUDENTS SHOULD BE ABLE TO …

Or

ON SUCCESSFUL COMPLETION OF THIS _____, STUDENTS WILL BE ABLE TO …

1	
2	
3	
4	
5	
6	

REMEMBER THAT GOOD LEARNING OUTCOMES ARE

STUDENT CENTRED: Learning outcomes express what the *students* will be able to do at the end of a learning session/course/program.

DEMONSTRABLE: Students will have an opportunity to show you that they have achieved this outcome, by *doing* something. Careful use of verbs is important.

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RELEVANT: If the outcome does not go some way towards meeting those at a higher level (e.g. course, program, discipline area), it is not relevant.

Assessment



ASSESSMENT

A brief guide for course designers

THE NATURE OF ASSESSMENT

Assessment 2020: Seven propositions for assessment reform in higher education (Boud and Associates, 2010) provides on guide to thinking about assessment that aligns with high academic standards and the needs of the sector. The propositions apply at a range of levels, from teaching in individual courses, to institution-wide approaches.

> "Assessment is a central feature of teaching and the curriculum. It powerfully frames how students learn and what students achieve" (p.1)

ASSESSMENT HAS MOST EFFECT WHEN …

… assessment is used to engage students in learning that is productive.

… feedback is used to actively improve student learning.

… students and teachers become responsible partners in learning and assessment.

… students are inducted into the assessment practices and cultures of higher education.

… assessment for learning is placed at the centre of subject and program design.

… assessment for learning is a focus for staff and institutional development.

… assessment provides inclusive and trustworthy representation of student achievement.

Some of the key features of our approach to assessment are captured in this document, including:

- Placing assessment at the heart of the curriculum, aligned with teaching and learning activities and desired outcomes.
- Developing assessment practices that focus students on learning, not just on achieving grades;
- Providing feedback that is used by students to improve their work;
- Developing students' critical judgement skills and self-direction.

With these in mind we consider assessment as an essential part of any curriculum, not simply as a tool for measuring students' performance.

Fink (2003) refers to "audit-ive" and "educative assessment" (Wiggins, 1998), distinguishing between the two in order to argue for an approach that works not just to grade students, but to improve students' learning. The former type of assessment merely focuses on what the student has done in order to give them a grade. The latter type is what we usually term "formative"; it is forward-looking, provides students with opportunities to self-assess, and is focused on criteria and standards and "FIDeLity" feedback (Fink's own term).

In this section, we will focus only on assessment for learning, leaving out focus on criteria and standards (and rubrics), and feedback for the coming sections.

ALIGNMENT

In the model of constructive alignment (Biggs and Tang, 2007), learning outcomes specify the activity that students will do. Largely, learning takes place through activities in and out of class, and assessments confirm and motivate performance. However, assessment tasks should also be considered as a learning activity (this is particularly true for problem-based learning models, for example). Importantly, "assessment tasks should comprise an authentic representation of the course ILOs" (p. 163). This should be true regardless of whether the tasks are formative or summative in nature.

Fink's model (2003) also approaches assessment design with the same type of alignment in mind, preferring the term, 'integration'.

CHECKING ALIGNMENT

For each of your course assessment tasks, identify the learning outcomes and graduate attributes that it assesses.

For each of your course learning outcomes (and graduate attributes), identify where and how students are being assessed.

Are there gaps, redundancies?

For example, you may find that a particular outcome is not being assessed at all because it does not align with any of the assessment tasks. If this is the case consider the usefulness of the outcome and/or the nature of the assessments. Alternatively, you may find that an assessment you believe is essential is not represented by a learning outcome. In this case you may add a learning outcome, or amend what you have.

Use the evaluation sheet provided.

This check also gives you the opportunity to revise your learning outcomes.

SUITABILITY

How suitable are your assessments tasks for students' demonstration of their achievement of the outcomes?

THE TYPE OF ASSESSMENT

Formative assessment
"Assessment used to give students feedback on the progress towards achieving the intended student learning outcomes in a subject or unit. Used to refer to any assessment whether graded or ungraded, which has as it primary purpose the encouragement of students learning by the provision of feedback on performance." (Nightingale, Te Wiata, Toohey, Ryan, Hughes & Magin, 1996, p. 269)

Diagnostic assessment
"[Assessment] designed to discover, for the benefit of teachers and/or students, gaps in learning, the nature of students misconceptions or other impediments to learning." (p. 268)

Summative assessment
"Assessment used to gain a view (or summation) of the student learning outcomes achieved in a subject, unit or course." (p. 273)

THE FORMAT OF THE ASSESSMENT

The key to evaluating your assessment tasks is simply to refer to the verb used in the related learning outcomes, and ask "Do the students have the opportunity to do this by completing the task?" For example, if a learning outcome states that students should be able to "explain" something, multiple-choice questions are unlikely to be a suitable task for this to take place. Thus assessment validity is very important.

Although your assessment items may be suitable in his regard, ask yourself if there are better alternatives. An oral presentation may give students the opportunity to explain a key concept as well as allowing students to demonstrate their oral communication skills. For some courses this is an essential academic skill distinct from, but related to, the content of the course.

Another important consideration is whether any of your students may be disadvantaged by the format of the assessment. If so, are you able to adapt it to suit their needs?

Refer to the information sheet provided. It will give you some ideas for alternatives that may be more suitable for your course.

THE MODE OF THE ASSESSMENT

There are a variety of modes of assessment that may be suitable for your course. These could include:

- In-class or out-of-class assessments;
- Closed-book or open-book examinations;
- Online assessments;
- Individual or group assessments;
- Etc.

Again, another important consideration is whether any of your students may be disadvantaged by the format of the assessment. If so, are you able to adapt it to suit their needs?

Considering alternatives may free up in-class time, reduce workload, improve the quality of feedback, etc. While some of these decisions may be largely based on practical considerations, it is important that they do not compromise the integrity of the task itself.

DIFFICULTY

Careful consideration should be to the level and complexity of the tasks, ensuring that they are suitable for the prior learning and capabilities of the students undertaking the course.

Particularly for first-year courses, course designers should be careful not to expect that all students be already in possession of high-level thinking skills. Any task that requires these should be carefully constructed and students scaffolded through a process of developing these skills. See the evaluation sheet for FY course designers. (An additional workshop is available for FY course designers.)

Similarly, assessments for more advanced courses should not demand too little of students.

When evaluating your assessment tasks, consider the types of students you have, their progression through a degree program, and the difficulty level of tasks required at that stage of the program. Consider also any accreditation guidelines that may impact on the level of the tasks.

WEIGHTING

The University's Assessment Policy (000995) states:

> "Assessment weightings should reflect the demands and relative importance of an assessment item, and the overall assessment load in a course should reflect the unit value of that course."

Additionally, weighting should be reflective of the relative importance of learning outcomes, and the degree of effort required to complete the task.

TIMING

Consideration should be given to the timing of tasks.

- Is there enough time for students to complete the task to a high level?
- Is there enough time between one task and another for providing students with feedback they can use?
- Do other concurrent courses have assessment items due at the same time?

Adjustments should be made so that students are fairly assessed, not overloaded (this is a sure way to have students treat the tasks in a shallow manner), and can make use of their feedback for improving their future work.

DIVERSITY AND VARIETY

Ideally, a variety of assessment methods should be used such that students can practice and demonstrate a range of skills, and students with varying strengths and weaknesses may have the opportunity to demonstrate their understanding. If students are exposed to a limited range of assessment types, there may be certain important skills that they will not have the opportunity to develop. Consider the types of assessments that your students will be completing in other courses they may be undertaking. Is there too much repetition? Can you improve students' engagement in your tasks by considering alternatives? Are some students disadvantaged by an overreliance on particular types of assessments?

CLARITY

Last but by no means least, evaluate the clarity of your assessment tasks. While the question, or direction, may be clear to you, it may not be to students. Try to read the task instructions objectively and assess whether or not students may misunderstand what it is they are to do, and the level at which they are to do it. Is there ambiguity? Is there too much information?

ASSESSMENT DESIGN: MATCHING TASKS WITH GENERIC LEARNING OUTCOMES (GRADUATE ATTRIBUTES, ACADEMIC LITERACIES)

An information sheet for course designers

Are you wondering whether or not you are using the most appropriate tasks for developing and assessing particular skills/knowledge and understanding, related to the development of transferable or generic skills, aligning with graduate attributes and academic literacies?

The information in this sheet has been sourced from UNSW's Assessment Toolkit (http://teaching.unsw.edu.au/printpdf/531)

THINKING CRITICALLY AND MAKING JUDGMENTS (DEVELOPING ARGUMENTS, REFLECTING, EVALUATING, ASSESSING, JUDGING)

- Essay
- Report
- Journal
- Letter of advice to...
- Present a case for an interest group
- Prepare a committee briefing paper for a specific meeting
- Book review (or article) for a particular journal
- Write a newspaper article for a foreign newspaper
- Comment on an article's theoretical perspective

SOLVING PROBLEMS AND DEVELOPING PLANS (IDENTIFYING PROBLEMS, POSING PROBLEMS, DEFINING PROBLEMS, ANALYSING DATA, REVIEWING, DESIGNING EXPERIMENTS, PLANNING, APPLYING INFORMATION)

- Problem scenario
- Group work
- Work-based problem
- Prepare a committee of enquiry report
- Draft a research bid to a realistic brief
- Analyse a case
- Conference paper (or notes for a conference paper plus annotated bibliography)

PERFORMING PROCEDURES AND DEMONSTRATING TECHNIQUES (COMPUTATION, TAKING READINGS, USING EQUIPMENT, FOLLOWING LABORATORY PROCEDURES, FOLLOWING PROTOCOLS, CARRYING OUT INSTRUCTIONS

- Demonstration
- Role play
- Make a video (write script and produce/make a video)
- Produce a poster
- Lab report
- Prepare an illustrated manual on using the equipment, for a particular audience
- Observation of real or simulated professional practice

MANAGING AND DEVELOPING ONESELF (WORKING CO-OPERATIVELY, WORKING INDEPENDENTLY, LEARNING INDEPENDENTLY, BEING SELF-DIRECTED, MANAGING TIME, MANAGING TASKS, ORGANISING)

- Journal
- Portfolio
- Learning contract
- Group work

ACCESSING AND MANAGING INFORMATION (RESEARCHING, INVESTIGATING, INTERPRETING, ORGANISING INFORMATION, REVIEWING AND PARAPHRASING INFORMATION, COLLECTING DATA, SEARCHING AND MANAGING INFORMATION SOURCES, OBSERVING AND INTERPRETING)

- Annotated bibliography
- Project
- Dissertation
- Applied task
- Applied problem

DEMONSTRATING KNOWLEDGE AND UNDERSTANDING (RECALLING, DESCRIBING, REPORTING, RECOUNTING, RECOGNISING, IDENTIFYING, RELATING AND INTERRELATING)

- Written examination
- Oral examination
- Essay
- Report
- Comment on the accuracy of a set of records
- Devise an encyclopaedia entry
- Produce an A–Z of ...
- Write an answer to a client's question
- Short answer questions: True/False/ Multiple Choice Questions (paper-based or computer-aided assessment)

DESIGNING, CREATING, PERFORMING (IMAGINING, VISUALISING, DESIGNING, PRODUCING, CREATING, INNOVATING, PERFORMING)

- Portfolio
- Performance
- Presentation
- Hypothetical
- Projects

ALIGNMENT OF CURRENT ASSESSMENT TASKS

An evaluation sheet for course designers

PART A

TASK	WEIGHTING	OUTCOME/S ASSESSED	GRADUATE ATRIBUTES ASSESSED
Brief description of what students are to do	%	Which outcomes are assessed?	Which GAs are assessed?

QUESTIONS:

Do the existing tasks adequately assess the learning outcomes and graduate attributes of the course?

What changes will need to be made?

PART B

LEARNING OUTCOMES	ASSESSMENT TASK/S	WEIGHTING
List learning outcomes	Which assessment task/s measure achievement of these outcomes?	%

QUESTIONS:

Are the learning outcomes for the course assessed adequately?

What changes will need to be made?

OVERALL EVALUATION:

SUITABILITY OF CURRENT ASSESSMENT TASKS

An evaluation sheet for course designers

TASK	TYPE	FORMAT	MODE	DIFFICULTY	WEIGHTING
Brief description of the task	Is the type of task (e.g., formative, diagnostic, summative) appropriate? Are changes required?	Is the format of the task (e.g., essay) appropriate to measure the outcomes? Are there better alternatives?	Is the mode of the task (e.g., in-class test) appropriate? Are there better alternatives?	Is the difficulty of the task appropriate in terms of skill level and complexity?	Is the task at an appropriate weighting to reflect its importance, contribution to learning outcomes, and student workload?

OVERALL REVIEW OF CURRENT ASSESSMENT TASKS

An evaluation sheet for course designers

TASK	ALIGNMENT	SUITABILITY	TIMING	DIVERSITY	CLARITY
Brief description	How does the task align with learning outcomes and other requirements (such as graduate attributes)? (Use separate sheet for detailed evaluation.)	Is the task suitable in terms of its form, type, mode, level, and weighting? (Use separate sheet for detailed evaluation.)	How is the timing of this task in terms of level of student learning, student workload, and feedback?	How does this task contribute to the diversity or otherwise of assessment methods for the course/program?	Is the task clear (not too ambiguous and not too detailed)?

FY ASSESSMENT

A brief guide for FY course designers

The nature of assessment in higher education poses challenges for students new to university. A good first year curriculum places assessment at the heart of the learning experience, and is designed so that students are assisted in their transition.

Key aspects of assessment in first year courses include variety, and the provision of good quality feedback. There are a number of other considerations.

The following has been adapted from Kift (2010) as part of the UON Seahorses Project (2012).

FY CURRICULUM/ASSESSMENT …

… helps students transition into higher education assessment

… needs to be at an appropriate level

… provides an early, low-stakes, starting point

… unpacks the 'mysteries' of the university assessment processes

… provides opportunities for self-and peer-assessment

… approaches feedback as feeding forward

LEVEL

Early tasks are an introduction to university assessment, and should not demand more of students than is appropriate.
Throwing first year students into the 'deep end' can have lasting negative effects upon student learning. It is best to begin students on smaller, less complex tasks that reflect their starting point in a course and program, relative to future achievement levels. Overall, a program should reflect increases complexity as the students make progress. Benefits for students include a reduction in anxiety, which can be a significant barrier to learning and to success.

EARLY LOW-STAKES STARTING POINT

Students should get early feedback, so that they can address issues without risk of starting university with a failure.

When learning to walk a tight-rope, acrobats do not try to do so 10 metres in the air. Low-stakes assessment items can help students to adjust to assessment processes at university without having to take too much of a risk of failure.

When done early, students can get quick feedback on how they are going and make decisions about how they should respond (for example, get help with literacy, or evaluate their choice of program). Teachers can obtain timely information about their students' levels of learning and address these, improving students' learning progress in the course.

UNIVERSITY ASSESSMENT PROCESSES

Provide students with clear, concise information about how to submit good quality work to you.

Unpack the mysteries of the university assessment processes. These have a serious impact on students' adjustment to university life. Completing cover sheets, submitting work through Turnitin, understanding academic integrity, and having good knowledge of policies relating to assessment may seem peripheral for a course coordinator, but they are not for students. Provide students with simple 'how to' sheets that will guide them through the process, and provide a forum for them to ask questions about these things.

OPPORTUNITIES FOR SELF- AND PEER-ASSESSMENT

Develop students' self-evaluation skills and understanding of what good work looks like.

One of the best ways for students to develop skills of evaluating their own work is to have those addressed explicitly within a course. First (and other) year students, and their teachers, will benefit from in-class opportunities to examine their own and peers' work. Unpacking the wording of marking criteria is essential. "Good" work may be obvious to you, but it may not be to someone else. The provision of annotated work samples is a good idea. Integrating this focus on learning within FY course design is critical.

FEEDBACK IS FOR FEEDING FORWARD

Feedback should be feed forward!

Providing an assessment of past work is only useful if it provides guidance about how to go about things in the future. For the next assessment task, or a task like the one at hand, what exactly can the student do to improve their work? Students also need to know how to go about it, so providing recourses or links to resources is important. Providing too much feedback can be detrimental, and so can providing falsely positive feedback. Students will respond well to a small number of points, and need to be clearly told how they can improve if they are to do so. Strategic feedback that also tells students how to go about addressing issues will help students improve their work in the future.

IN A NUTSHELL

A good first year curriculum design includes providing students with the opportunities to develop their skills of self-assessment and the process of assessment at university. Providing these opportunities within a low-risk environment can go a long way to developing students as successful learners in the university environment. This does not just benefit students – it benefits their teachers as well.

FY ASSESSMENT STRATEGIES

An evaluation sheet for FY course designers

FIRST YEAR PRACTICE	
STRATEGIES	I USE / I CAN USE …
Helps students transition into higher education assessment by offering variety and early feedback.	
Needs to be at an appropriate level such that early tasks are an introduction to university assessment, and should not demand more of students than is appropriate.	
Provides an early, low-stakes, starting point so students can get early feedback, and address issues without risk of starting university with a failure.	
Unpacks the 'mysteries' of the university assessment processes by providing students with clear, concise information about how to submit good quality work to you.	
Provides opportunities for self-and peer-assessment to develop students' self-evaluation skills and understanding of what good work looks like.	
Approaches feedback as feeding forward so students learn how to go about addressing issues that will improve their work in the future.	

NOTES

ALIGNMENT OF ASSESSMENT TASKS

A design sheet for course designers

PART A

TASK	WEIGHTING	OUTCOME/S ASSESSED	GRADUATE ATRIBUTES ASSESSED
Brief description of what students are to do	%	Which outcomes are assessed?	Which GAs are assessed?

PART B

LEARNING OUTCOMES	ASSESSMENT TASK/S	WEIGHTING
List learning outcomes	Which assessment task/s measure achievement of these outcomes?	%

SCHEDULE OF ASSESSMENT TASKS

A design sheet for course designers

TASK	WEIGHTING	DUE DATE	SUBMISSION	OUTCOMES ASSESSED	GRADUATE ATTRIBUTES ASSESSED	RETURNABLE?
Title of task, and brief description	%	Date & time (Week #)	e.g., Turnitin, to tutor	List numbers	List numbers	Yes / No

Criteria, standards and rubrics



CRITERIA AND STANDARDS

A brief guide for course designers

THE STANDARDS MODEL OF ASSESSMENT

Our assumption is that course designers will be using a standards model of assessment (criterion-referenced assessment). This model judges students' performance against certain criteria, and awards grades according to the standards they achieve. Norm-referenced assessment (assessment that judges students' performance against the performance of others) is not recommended for use at this university. The University's Assessment Policy (http://www.newcastle.edu.au/policy/000995.html) states "Student performance must be measured against pre-advised criteria. This assists with consistency in marking and feedback, by clarifying the requirements for all students and the markers for a course. Norm based marking is not utilised". Biggs & Tang (2007) provide detailed information in their chapter *Aligning assessment tasks with intended learning outcomes: Principles* (pp. 163-194).

Ensuring assessment validity (the extent to which it aligns with the course objectives / learning outcomes) has been our focus thus far, but we now add ensuring assessment reliability (the extent to which consistent judgements can be made) to that focus. Defining criteria and the standards against which students' work will be judged, is a central part of any assessment, and thus course design.

Fink (2003) talks about criteria and standards as the second feature of the assessment design process. He claims that this is often an overlooked aspect of course design, with many 'rubrics' not providing clear enough guidelines to students and markers. It is our mission now to examine how we can do this.

Fink also brings an extremely important point to the fore: the ability of students to assess the quality of their own work. This is made possible through the development of criteria and standards AND through ensuring that students understand them well. It is well-acknowledged that if students have more 'ownership' of the criteria and standards, they will be more likely to meet them. This can be done by allowing them to have input into the development of criteria and standards, and/or by having them examine their own and/or others' work against them. For three excellent examples of self-assessment activities, refer to Fink (2003, pp. 93-94).

THE ROLE OF CRITERIA AND STANDARDS

Assessment criteria are the properties or characteristics from which you can judge student learning.

Quality *standards* or descriptors of an assessment criterion are the level at which students might demonstrate their achievement of learning and performance against that criterion.

It is important that these are shared with students as early as possible so that they can have a clear idea of what is expected of them, in terms of the work they submit for assessment. Criteria and standards, because of their nature in defining the quality of work expected of students, should be used as a regular reference point throughout the course. High standards should be modelled by the teacher/s, and explained so that students may be able to learn how to meet them.

CRITERIA AND STANDARDS …

… define the quality of work you expect from students

… guide students (and teachers) in their work

… grade students

… provide feedback to students

… help with evaluating assessment tasks

RUBRICS

A *rubric* is a document that outlines a number of relevant criteria and quality standards for each criterion usually on a point scale indicating lowest and highest level of performance that students can achieve.

A useful rubric will provide:

- A description of what should be addressed in an assignment;
- The expectations regarding the quality of work; thus guiding students in preparing their assignment;
- Information for the staff who will be assessing the assignments; and
- Feedback to students on their performance.

Why use a rubric?

Using a rubric can:

- Increase objectivity of marking processes;
- Clarify and demystify assessment judgements and marking processes;
- Explain more easily to students why they received the mark they did;
- Assist students to improve their work and their marks;
- Encourage students to become aware of and monitor their own levels of performance; and
- Minimise the number of questions regarding expectations for assignments, performance, and marks given.

Following are some useful questions for reflection when designing assessment tasks, criteria and standards to assess the demonstration of student learning.

- Why did you create this assessment?
- Have you given this assessment or similar assessment before?
- How does this assessment task / item relate to the rest of what you are teaching?
- What skills will students need to have or develop to successfully complete this assessment?
- What exactly is the task assigned?
- What evidence can students provide that would show they have accomplished what you hoped they would accomplish when you created this assessment task / item?

- What are the highest expectations you have for students performance on this assessment overall?
- What is the worst fulfilment of the assessment requirements you can imagine?
- Where have students fallen short on the completion of similar assessment items in the past?
- What are some of the pitfalls you can help your students to avoid this time?

EVALUATING YOUR RUBRIC

When evaluating your rubric, use the five following points as a starter. The evaluation sheet will assist you.

Alignment

It is important that the criteria and the standards align closely with the task and the course outcomes. These need to be a *valid* measurement of students' achievement of the outcomes and/or skills, knowledge and understanding that work towards the achievement of the course outcomes. Are the standards descriptive of what students need to do?

Distinctness

Each of the criteria and standards needs to distinct and definite. If not, there will be ambiguity about what constitutes a certain level of quality, and marking will not be *reliable*.

Clarity and succinctness

Work of each standard needs to be described in a clear, succinct manner that will be understood by students and markers. Words that are ambiguous in their meaning should be avoided at all costs. This will also impact upon reliability.

Reasonableness

Work of each standard must be at a reasonable level for the marks indicated. In particular, the top standard should be achievable, but only by work of the highest expected quality.

Level

Standards should not be too trivial or easy to achieve, nor should they be impossible to achieve.

DESIGNING CRITERIA AND STANDARDS (& RUBRICS)

The following steps will help you to design new rubrics for your course. They are partly informed by Hughes (n.d.). *Quickbite: Practical guidelines for writing assessment criteria and standards* (University of Queensland).

WHAT IS IMPORTANT?

For each task, ask yourself what you want to evaluate when you see students' work. This could be a number of things, such as 'critical reasoning', or 'application of theoretical framework', or 'depth of analysis', 'communication', etc. Keep this low in number.

Although you may require specific or technical inclusions, in some cases it may be better to have these as hurdle requirements, rather than an indication of 'quality' of work. This will depend on your discipline, the nature of the task, and (of course) the learning outcomes it is assessing.

For example, for an essay designed to assess students' understanding of a particular event and its social impacts, assigning marks to the number of references used may well be inappropriate as a measure of quality of the essay itself. The appropriate and thoughtful use of three references is likely to have produced a better response than the simple collection and mention of eight references. Thus, rewarding the number of references may not be rewarding good quality work.

HOW MANY STANDARDS WILL YOU NEED AND HOW WILL YOU LABEL THEM?

You will need to describe the quality of work for each criterion at the best standard, and most likely, you will need to include a description of work for each that represents a fail standard. Depending on your needs you may wish to describe two or three intermediate standards – one at pass level and one at a level mid-way between a pass and the top level.

You may wish to use the University's grade terminology (that is, 0-49% represents a Fail grade, 50-64% represents a Pass grade, etc.), but it is not advised. Since these are used for final course grades, and as each assessment task is unlikely to be a good indicator of the final grade, students may make incorrect assumptions about their level of learning. This is especially true if tasks become progressively more difficult throughout the course.

DEVELOP VERBAL DESCRIPTIONS OF STANDARDS

Start with describing the best work and have this as your highest standard. Then move to the standard below and state what this work looks like, and why this does not qualify for the highest standard. Students and markers should be able to clearly understand the difference between the two, so being clear about this is very important.

AN EXAMPLE FOR DISCUSSION

Criterion	Standard 1 (Fail) (0-5)	Standard 2 (Pass – Credit) (5-7)	Standard 3 (Distinction – High Distinction) (8-10)
Use of evidence and justification	The work does not include enough reference to key literature in the field, leaving the analysis largely unsubstantiated and/or overly generalised.	The work displays moderate levels of reference to key literature in the field. However, there are areas at which important ideas within known literature remain unsubstantiated and/or absent, or the literature is not applied meaningfully.	The work demonstrates meaningful application of key literature in the field in the analysis. There are very few (if any) areas at which the reader requires substantiation for any arguments made.

The clearer this is, the fewer queries you will receive about your marking as the descriptors should convey good quality feedback to students.

Do this for all the standards.

Use the guidelines below to avoid common issues with writing descriptions of standards.

WHEN DESCRIBING STANDARDS…	USE…..	RATHER THAN….
Specify demonstrable behaviour	*Rephrases problems in own words and identifies major issues*	*Understands and interprets problems*
Describe the behaviour - *not* the student	*The ideas of others are acknowledged in ways outside the conventions of this discipline*	*You are not good at referencing*
Pointing out what *was* done in demonstrating lower than optimal standards is often more supportive of learning than listing what *was not*	*Argument consists of a series of assertions only*	*No supporting evidence provided for arguments*
Avoid vague terms which are open to a wide range of subjective interpretation such as "critical", "appropriate", "excellent", "analytical"	*Evidence of familiarity with recommended course reading* *Analysis demonstrates an awareness of the implications of significant detail*	*Evidence of appropriate reading* *Sophisticated analysis*
Use terms likely to be understood by students – avoid the obscure or esoteric	*Demonstrates comprehensive and detailed knowledge of major facts, concepts and procedures addressed in course materials*	*Secure and pronounced knowledge(Woolf, 2004)*
Avoid relative terms - comparatives are rarely helpful without a benchmark standard	*Major issues are identified with discrimination and without distraction by irrelevant material* *Solutions to problems are original and/or innovative without losing feasibility*	*Analysis is more analytical* *More creative solutions offered to problems presented*
Ensure a balance between validity and reliability ie don't seek precision through quantitative statements which can trivialise complex learning outcomes.	*References included have limited relevance to the problem (low standard)* *Discerning selection of references from within and beyond recommended course materials*	*Includes two references (low standard)* *Includes more than six references (high standard)*

TEST THEM OUT ON SOMEONE

Ask a knowing other to comment on whether or not your standards are up to scratch. Ask them to use the five-point rubric tester.

QUICKBITE: PRACTICAL GUIDELINES for WRITING ASSESSMENT CRITERIA and STANDARDS

<table>
<tr><th>STAGE</th><th>GUIDELINES</th></tr>
<tr><td colspan="2">BEFORE YOU START</td></tr>
<tr><td>i. Review the Course Profile:</td><td>Check that:
course learning objectives clearly and comprehensively describe the learning to be developed by students
the assessment tasks you have designed provide adequate opportunity for students to demonstrate intended learning objectives.</td></tr>
<tr><td>ii. Clarify your understanding of the terms ‘criteria’ and ‘standards’ –</td><td>It is important to understand the distinction between criteria and standards. A clear understanding of these terms will make the development task easier. Sadler (1987) defines these terms as:

Criterion: a property or characteristic by which the quality of something may be judged. Specifying criteria nominates qualities of interest and utility but does not have anything to offer, or make any assumptions about, actual quality.

In the example below, the criterion “fluency of expression” is expressed as a noun phrase which does not imply a specific quality. It is better to avoid the use of adjectives or adverbs (eg” fluent expression”, “expression is fluent” or “expresses ideas fluently”) as these imply a level or standard rather than a criterion.

Standard: a definite level of achievement aspired to or attained. Standards are about definite levels of quality (or achievement, or performance).

Table 1: Distinguishing between criteria and standards<table><tr><th rowspan="2">Criteria</th><th colspan="3">Standards</th></tr><tr><th>Fail standard
(3-4 marks)</th><th>Pass standard
(5-7 marks)</th><th>High standard
(8-10 marks)</th></tr><tr><td>quality of expression</td><td>stilted, awkward and/or oversimplified expression resulting in overall lack of clarity of meaning.</td><td>correct but occasionally stilted or awkward expression although meaning is generally retained.</td><td>clear, concise, scrupulously accurate polished and sometimes innovative or original language used to express complex and abstract ideas and information</td></tr></table>The standards described in this example illustrate three distinct levels of quality, achievement or performance.

While it is true that standard labels such as “Excellent”, “Proficient” or “Fail”, often used in conjunction with marks, can convey standards to some extent, the guidelines that follow are based on the belief that verbal descriptors (such as those in the example above) are the most effective way of supporting student learning. Criterion-and standards-referenced assessment does not require the use of marks or percentages, however, should marks or percentages be required, they can be assigned to the verbal descriptions as illustrated above.</td></tr>
<tr><td>iii. Locate useful resources:</td><td>Institutional resources
3.30.2 Marking and Award of Grades
3.20.5 Statement of Graduate Attributes
Faculty, school or department resources (eg guidelines, models, exemplars)
Personal resources
Course Profile</td></tr>
</table>

<table>
<tr><th>STAGE</th><th>GUIDELINES</th></tr>
<tr><td></td><td>

Course Assessment program
Exemplars of student learning at different levels

Other resources

Generic taxonomies

Bloom's Taxonomy of Educational Objectives
http://www.tedi.uq.edu.au/downloads/bloom.pdf
Biggs structure of, the observed learning outcome (SOLO) taxonomy
http://www.tedi.uq.edu.au/downloads/Biggs_Solo.pdf
Orrell, J. (2003). A Generic Learning Rubric. Available online at:
http://www.newcastle.edu.au/services/teaching-learning/guide-teaching/assessment/workshops/Generic-Assessment-Rubric.doc
Price, M., & Rust, C. (2004). Assessment Grid. Retrieved 28 October, 2004, from http://www.heacademy.ac.uk/embedded_object.asp?id=20263&prompt=yes&filename=ASS016 (Business)

Discipline-related guidelines or examples (eg from the Higher Education Academy subject network http://www.heacademy.ac.uk/474.htm or general resource http://www.heacademy.ac.uk/resources.asp sections).

</td></tr>
<tr><td>iv. Investigate possibilities for collaboration</td><td>Developing criteria and standards in collaboration with colleagues is a good opportunity to share the workload and gain additional perspectives.
Involving students in the development of criteria and standards is an effective teaching and learning activity as well as a way of promoting shared understanding of the basis for assessment judgments.</td></tr>
<tr><td colspan="2">GETTING GOING</td></tr>
<tr><td>v. Select/develop and organise criteria</td><td>Assessment criteria are intended to increase the transparency of assessment judgments by alerting students to all the factors that will be considered in the making of judgments. If criteria such as 'creativity' or 'use of writing conventions (eg spelling, punctuation)' are considered to be important to the assessment judgment, they should be included in the written criteria.
Sources of criteria
The criteria that will form the basis of assessment judgments should reflect the learning objectives of the course and should be worded and organised in a way that makes this obvious to students. (Bloom's Taxonomy is a useful resource.) If learning objectives have been grouped according to the UQ Graduate Attributes, criteria can also be organised according to this framework as illustrated below.
Table 2: Linking learning objectives and criteria
<table>
<tr><th>Learning Objective</th><th>Assessment criteria</th></tr>
<tr><td>In-depth knowledge of the field
Demonstrate knowledge of literature relevant to …..</td><td>Familiarity with literature relevant to ...</td></tr>
<tr><td>Effective Communication
Communicate ideas and information in written and oral forms appropriate to the ….discipline</td><td>Appropriateness of citation and referencing to the …discipline</td></tr>
<tr><td>Critical judgment
Develop and support arguments on current issues relating to ….</td><td>Development and support of arguments relating to…</td></tr>
</table>
Criteria for all the assessment tasks that comprise the course assessment program should together provide a comprehensive coverage of the major learning objectives of the course. They should not introduce additional learning objectives such as those implied by the selection of unfamiliar text types that have not been addressed during the teaching and learning activities of this or any prior courses (eg technical report, client interview). Rather, this new learning should be specified with the learning objectives of the course.</td></tr>
</table>

<table>
<tr><th>STAGE</th><th>GUIDELINES</th></tr>
<tr><td></td><td>To be effective, criteria should be manageable in number so the desire to be comprehensive needs to be tempered by a realistic notion of how much information students can handle in relation to an assessment task.</td></tr>
<tr><td>vi. Decide how many standards will be described</td><td>Developing verbal descriptions of standards that make adequate distinctions between and among each of the seven levels of the UQ grading scheme would be an extremely difficult task. Most examples find it sufficient to describe four levels in answer to the following questions:
What is the best possible standard that can be anticipated in this learning environment?”
What is the least standard that will be considered acceptable?
What standards lie between these two?
What standard can be anticipated as unacceptable?
Sadler, 1998
However, the number of levels depends on the ability of the assessment task to make fine distinctions in a reliable way and the degree to which fine discrimination is required, eg a competency approach means a “Pass” standard only is required.
Though some schemes avoid describing a “Fail” standard, this can be quite useful in helping students identify behaviours that they should eliminate from their practice.</td></tr>
<tr><td>vii. “Label” the verbal descriptors of standards</td><td>Verbal descriptions of standards need to be linked in some way to the model to be used calculate final grades so that it describes and supports this process. Some examples are provided below. Note that these are used to ‘label’ verbal descriptions of standards, and do not serve as substitutes for standards.
Table 3: Some common terms used to ‘label’ verbal descriptions of standards<table><tr><td>1. Grades</td><td>1-2</td><td>3-4</td><td>5</td><td>6-7</td></tr><tr><td>2. Letters</td><td>D</td><td>C</td><td>B</td><td>A</td></tr><tr><td>3. % Bands</td><td>0-39%</td><td>40-59%</td><td>60-89%</td><td>80-100%</td></tr><tr><td>4. Marks</td><td>0-4</td><td>5-10</td><td>11-16</td><td>17-20</td></tr><tr><td>5. Labels</td><td>Fail</td><td>Competent</td><td>Advanced</td><td>Excellent</td></tr></table>Of the examples above:
1 links verbal standards to the university grade descriptors.
2 is used by lecturers who prefer profiling.
3 can be used when percentages are required (eg for the calculation of class of honours).
4 constitutes a simple marking scheme.
5 uses general descriptive terms.</td></tr>
<tr><td>viii. Develop clear descriptions of each standard for each of the criteria</td><td>Standards have to be pitched at a reasonable level. They should be neither so hard that no one can succeed nor so low that everyone succeeds at the highest level.
They must also be described in brief, clear, specific language that is accessible to students. Criteria need to be ‘unpacked’ before writing standards to identify relevant component attributes. High standards will often incorporate additional attributes such as metacognitive understandings or originality of perspective.
Accept that standards will never be able to carry all the detail of the explicit and implicit</td></tr>
</table>

<table>
<tr><th>STAGE</th><th>GUIDELINES</th></tr>
<tr><td></td><td>understandings students are to develop. Attempting to achieve levels of precision that remove all subjectivity from assessment judgements of complex learning will result in documents made unwieldy and therefore unfit for purpose through their length and obtuseness.

Reference to concrete examples in course assessment tasks, examples of student work and exemplars obtained from previous iterations of the course will help in framing clear standards. Additional writing guidelines are provided in Table 4.

Table 4: Developing verbal descriptions of standards
<table>
<tr><th>When describing standards…</th><th>Use…..</th><th>Rather than….</th></tr>
<tr><td>Specify demonstrable behaviour</td><td>Rephrases problems in own words and identifies major issues</td><td>Understands and interprets problems</td></tr>
<tr><td>Describe the behaviour - not the student</td><td>The ideas of others are acknowledged in ways outside the conventions of this discipline</td><td>You are not good at referencing</td></tr>
<tr><td>Pointing out what was done in demonstrating lower than optimal standards is often more supportive of learning than listing what was not</td><td>Argument consists of a series of assertions only</td><td>No supporting evidence provided for arguments</td></tr>
<tr><td>Avoid vague terms which are open to a wide range of subjective interpretation such as “critical”, “appropriate”, “excellent”, “analytical”</td><td>Evidence of familiarity with recommended course reading
Analysis demonstrates an awareness of the implications of significant detail</td><td>Evidence of appropriate reading
Sophisticated analysis</td></tr>
<tr><td>Use terms likely to be understood by students – avoid the obscure or esoteric</td><td>Demonstrates comprehensive and detailed knowledge of major facts, concepts and procedures addressed in course materials</td><td>Secure and pronounced knowledge(Woolf, 2004)</td></tr>
<tr><td>Avoid relative terms - comparatives are rarely helpful without a benchmark standard</td><td>Major issues are identified with discrimination and without distraction by irrelevant material
Solutions to problems are original and/or innovative without losing feasibility</td><td>Analysis is more analytical
More creative solutions offered to problems presented</td></tr>
<tr><td>Ensure a balance between validity and reliability ie don’t seek precision through quantitative statements which can trivialise complex learning outcomes.</td><td>References included have limited relevance to the problem (low standard)
Discerning selection of references from within and beyond recommended course materials</td><td>Includes two references (low standard)
Includes more than six references (high standard)</td></tr>
</table></td></tr>
<tr><td colspan="2">AFTER YOU’VE FINISHED</td></tr>
<tr><td>ix. Check, review, revise</td><td>Check for:
• grammatical consistency
• alignment with institutional grade descriptors to maintain standards

Regularly review your assessment criteria and standards to:
• benefit, through consultation, from the experience and expertise of peers
• respond to feedback from students
• ensure they fit adjusted assessment tasks</td></tr>
</table>

STAGE	GUIDELINES
	• maintain currency with changing university policy and regulations • take advantage of new resources • reflect your increasing expertise in their development.
x. Using criteria and standards	To ensure that assessment judgements are defensible, consist and transparent, it is essential that criteria and standards are used in conjunction with exemplars of student work and moderation processes. Formative activities such as practice marking, self and peer assessment, provision of feedback and structured reflection are additional ways of using criteria and standards for the enhancement of student learning.

QUICKBITE Assessment resource developed by Dr Clair Hughes (TEDI/The University of Queensland)

CRITERIA AND STANDARDS

An evaluation sheet for course designers

TASK	ALIGNMENT	DISTINCTNESS	CLARITY AND SUCCINCTNESS	REASONABLENESS	LEVEL
Brief description of task	Do the criteria and standards link directly to the task and its requirements?	Are the standards of achievement distinct and definite?	Do the descriptors convey the meaning of each standard, clearly and succinctly?	Are the marks at each standard reasonable for the effort and benefit?	Are the standards too easy/trivial or impossible to achieve?

CHANGES TO BE MADE:

CRITERIA AND STANDARDS

A design sheet for course designers

CRITERION	FAIL				BEST WORK
	Label	Label	Label	Label	Label
	Mark range	Mark range	Mark range	Mark range	Mark range
Property or characteristic of work	Unacceptable work looks like …				The best work looks like …

Feedback



DEVELOPING A FEEDBACK STRATEGY

A brief guide for course designers

THE NATURE OF FEEDBACK

THE IMPORTANCE OF FEEDBACK

Feedback "tops the list of … factors leading to good learning" according to Biggs & Tang (2007, p. 97). Along with clear goals expressed through learning outcomes, and criteria and standards, feedback motivates students to learn and think about their learning.

When thinking about which teaching methods might be best for your course (next section of this course design process), think about which ones will provide the most formative feedback for students. As Biggs & Tang claim, "The effectiveness of … teaching methods is directly related to their ability to provide formative feedback'" (p. 163).

In this section we will be focusing on developing a feedback strategy for your course - one that helps students to learn and helps you to gauge the quality of your teaching and course design.

Although we offer some particular strategies here, the links provided will assist you in developing activities and approaches that, in class, may provide better learning experiences, through feedback, for your students.

WHAT IS FEEDBACK?

Feedback is more than just about giving grades. There is broad agreement that feedback tells students how their work was good, how their work could have been improved, and how to go about improvement for next time. The third aspect here is the most important if feedback is to be formative, or educative. It is good practice to provide students with a direction for improvement rather than just a statement that they are in need of improvement.

It is important, according to Biggs & Tang that errors are used constructively, in other words, the teacher should expose mistakes with no risk of ridicule or failure for the students, and correct them in a way that students feel positively about being corrected. If students have particular strengths these also need to be encouraged. Without acknowledging these, students may be reticent to do their future work in a similar manner.

MODELS FOR FEEDBACK

Fink's FIDeLity model

Like others, Fink proposes that feedback is about acknowledging the good work students do, the ways in which they need to improve their work and how to go about that improvement. You will find that he has a slightly different conceptual framework to that which is commonly used. He does not use the terms 'formative' and 'summative' assessment. Further, he distinguishes between assessment and feedback (the former being measurement and the latter explaining the measurement). The concept of formative assessment … [say this nicely].

Fink argues that feedback needs to be Frequent, Immediate, Discriminating and done Lovingly.

- Frequent: feedback is given in every class if possible, from teachers or fellow-learners.
- Immediate: feedback is given as close to the learning activity or task as possible.
- Discriminating: feedback distinguishes between good and poor performance.
- done Lovingly: feedback is given with empathy for the student receiving it.

Nicol & Macfarlane-Dick (2004)

… emphasise, as does Fink, the role of the students in the feedback process. Based on a model devised by Butler & Winne (1995), and informed by a wide range of research in the area, students are seen as central and active to the process. Feedback is from both external and internal sources. External sources are teachers, peers, or other supervisors. Internal feedback is generated from within as the student measures their work against the criteria and standards, and makes sense of the external feedback (they develop knowledge, set goals, use tactics and strategies, etc.). To view the model, see the link at the end of this document.

It is widely agreed that the development of students' self-assessment skills is an essential part of having feedback work.

SEVEN PRINCIPLES OF GOOD FEEDBACK PRACTICE

Nicol & Macfarlane-Dick's briefing paper (2004) is a well-cited document, providing a conceptual model of the formative assessment/feedback cycle, 7 principles of good feedback practice, and some examples of good feedback strategies. Here are the 7 principles:

GOOD FEEDBACK PRACTICE …

… facilitates the development of self-assessment (reflection) in learning.

… encourages teacher and peer dialogue around learning.

… helps clarify what good performance is (goals, criteria, expected standards).

… provides opportunities to close the gap between current and desired performance.

… delivers high quality information to students about their learning.

… encourages positive motivational beliefs and self-esteem.

… provides information to teachers that can be used to help shape their teaching.

MODES OF FEEDBACK

EXAMPLES	DIMENSION OF FEEDBACK MODES	EXAMPLES
• Comments on a first draft of assignment • Online self-assessment • Adaptive tutorial	formative ⟷ summative	• Peer grading of group oral presentations • Summary of rationale for a grade
• Individual consultation • Comments on assignment • Peers reviewing each other's work	individual ⟷ generic	• Summary of class strengths / weaknesses after grading • Use of clickers in lectures
• Peer feedback on examples worked in class groups	manual ⟷ automated	• Automated feedback through online quiz tools • Adaptive tutorials
• Class discussion of an assignment in progress • Recording thinking-aloud commentary on students' work	oral ⟷ written	• Posts to class discussion on Blackboard • Email to individual students
• Self- assessment reflections submitted after assignment • Peer assessment	student-led ⟷ teacher-led	• Annotated samples of previous students' work • Industry guest's comments on a student forum

(from UNSW, http://teaching.unsw.edu.au/printpdf/537)

EVALUATING YOUR CURRENT FEEDBACK STRATEGY

SOME KEY QUESTIONS TO START:

- Do your students receive (or pick up) their feedback?
- Is there evidence that your students read and act on their feedback?
- Does the feedback you give to students improve the quality of their work?

The answers to these questions, and a consideration of the reasons why, may generate some cause for reconsideration of your strategy. How do your current practices measure up against the key principles, and other advice about good practice?

Use the evaluation sheet to help you consider different aspects of feedback practice related to each of your tasks.

DESIGNING A FEEDBACK STRATEGY

Designing a strategy can help iron out many of the challenges faced by teaching staff related to giving students feedback on their work. Along with well-constructed criteria and standards, a good feedback strategy can help to:

- Decrease the number of complaints from students;
- Decrease the amount of time spent communicating the same messages again and again;
- Improve reliability among markers; and,
- Increase the quality of students' work.

Using your evaluation, map out your feedback strategies to students throughout the duration of your course using the design sheet provided. Consider the following sub-strategies.

SUB-STRATEGIES

1. Individual feedback given
2. Class feedback given
3. Discussion of last year's feedback to students
4. Student self-assessment
5. Peer assessment
6. Draft submission
7. Re-submission after feedback
8. Provision / discussion / development of annotated sample
9. Ungraded assessment (e.g., one-minutes papers, quizzes, clicker responses …)
10. Lesson on using feedback
11. Class discussion of criteria and standards
12. Class discussion of feedback post task
13. Development of criteria and standards with students
14. Individual meetings to discuss feedback
15. Student response to feedback
16. Student stipulation of required feedback

COURSE EVALUATION STRATEGY

An evaluation sheet for course designers

STUDENTS

In what ways do you obtain feedback on your course from students?

Is student evaluation adequate? (consider type, regularity, how targeted/generic, etc.)

Does the feedback:

- justify to students how their mark or grade was derived?
- identify and reward specific qualities in student work?
- guide students on what steps to take to improve?
- motivate them to act on their assessment?
- develop their capability to monitor, evaluate and regulate their own learning (Nicol, 2010)?

Are there issues with the modes of feedback?

Do you discuss feedback (after it is given) with students individually or in class?

Do you give previous years' feedback to students before they attempt a task?

Do you give students an opportunity for self-assessment against criteria?

General comments from your evaluation:

FEEDBACK STRATEGY

A design sheet for course designers

(Please see list of strategies in the Brief Guide)

week	strategy	comments
1		
2		
3		
4		
5		
6		
7		
8		

9		
10		
11		
12		
13		
EXAM 1		
EXAM 2		
EXAM 3		
POST SEMESTER / TRIMESTER		

comments:

Teaching and learning activities



TEACHING AND LEARNING ACTIVITIES

A brief guide for course designers

KEY UNDERSTANDINGS

Cantwell (2010) reminds us that academic learning is a complex task. For that reason some thought needs to be put into the design of any teaching and learning activities. He identifies three domains important for both teachers *and learners* to consider: the cognitive domain, the metacognitive domain and the affective domain. In a nutshell, these refer to: using sensory, working and long-term memory; knowing and having control over how these processes work; and having self-efficacy in learning.

Biggs and Tang claim there are important shifts to thinking about class at universities. The first is that lectures and tutorials (and other organised/timetabled classes) are teaching and learning *situations*, not methods of teaching. This is fundamental to our approach. They remind us, secondly, that *learning* should be our focus – not teaching. This, too is fundamental to our approach, and is why we started our course design process with careful design of the course learning outcomes! The third important thing for us to take into account is that learning does not *only* take place inside of class or other teacher-directed activities. We need to think about what students do outside of class (or teacher-led online activities), and make that a part of our course design.

Fink's approach to planning for teaching and learning activities is in complete agreement with these points and puts this last front and centre of the design process. Active learning, he says, is a combination of experiences (doing and observing) and reflection (what is learned and how, alone and with others).

Using a range of teaching and learning activities assists with learning on a number of levels. One style is rarely suitable for all content types, or for all students. Students will develop their thinking skills if they are actively engaged in learning in different ways. Finally, students report getting bored with the same style of lessons all the time.

DEEP LEARNING CAN BE FOSTERED WHEN …

… we consider the cognitive, metacognitive and affective domains
… classes are considered situation and not methods of teaching
… learning, rather than teaching, is the focus
… consideration is given to out-of-class activities
… a range or variety of activities is used
… learning involves experience as well as reflection on those experiences.

CHOOSING TEACHING AND LEARNING ACTIVITIES FOR YOUR COURSE

BIG PICTURE

Assessment, criteria & standards, and alignment with outcomes

Start with analysing the assessment tasks for the course, as well as the criteria and standards against which students' performance will be measured. Because you have already aligned these with the course learning outcomes, graduate attributes, and other accreditation requirements, the teaching and leaning activities you choose should also be aligned with the course learning outcomes. It is important to keep this alignment in mind as you go. Choose several key strategies that are suitable for your course content.

Academic literacies

In considering the course assessment tasks write down the implicit academics skills students will need to be proficient in in order to complete the tasks well. Academic literacy development is a crucial consideration for all years of university, and especially for first year students. For example, if you are requiring students to

carry out a critical analysis, how and when will they be learning to do this? If students are required to write a report, how and when will the students be learning about report writing in your discipline? You can consult with a Learning Adviser (CTL) if you would like assistance with this aspect of course design, however the information sheet provides a list of activities you may want to choose.

In-class and out-of-class, individual and with others

A great deal of students' actual learning occurs outside of the organised classroom (real or virtual), so it makes sense for course designers to consider what students are going to be doing in that time. It is customary to require students to read a set text, for example, before coming to class. How are your students guided in this process and is it active? However, other learning experiences should be considered … the most important of these is the process of completing an assessment task! What should students be doing individually, or with others, when you are not 'with' them?

Modes, including the use of technology

Are there some activities that are suitable for online engagement, or for which technology could be used? It is possible that students' understanding could be deepened by the strategic use of technology, or other modes of teaching than you currently use? For example, you might find that the flipped classroom model (see http://en.wikipedia.org/wiki/Flip_teaching) will work better for you, or developing lectures as 10 minute video lessons with short quizzes. CTL's BOLD Lab can talk you through, and help you implement, a range of strategies (bold@newcastle.edu.au).

Organisation

Revisiting the strategic sequencing of topics may be the next step. It is often easy to let the content of the course drive the sequence, or the chapters in a textbook. While this ostensibly is not a bad thing to do, it may not stimulate the development of active, deep learning in students. If students have had trouble in the course before, perhaps a change in the sequence of topics may be helpful.

THE DETAILS

While it is a good idea to get an overall picture of teaching and learning activities throughout a course, it is crucial, at the course design phase, to fill in the details. This way, teaching and learning activities can be scheduled and developed to maximise students' learning and to take into account our guiding ideas.

For each week or unit, write (using the guide, especially the lists of verbs) a set of learning outcomes.

At the end of this class / week / unit / … students should be able to:

These are, of course, informed by the course learning outcomes, but take into account students' learning leading to the achievement of those learning outcomes.
Use the guide provided for writing learning outcomes.

An example

At the end of this COURSE, students should be able to … "explain the fundamental concepts of finance in the finance decision making process".

One of the smaller WEEKLY learning outcomes might be "explain the concept of time value of money", developed in activities scheduled for Week 1.
Whatever, activity the students partake in (inside and outside of class) will mean that they need to have the opportunity to "explain …". Refer to the Infosheets provided, keeping in mind our key understandings.

The design sheets attached will allow you to focus on choosing teaching and learning activities with both the bigger picture and the details in mind.

TEACHING AND LEARNING ACTIVITIES

An information sheet for course designers

1. FOCUS ON TRANSFERRABLE SKILLS OR ACADEMIC LITERACIES

(Note that many of these are at the same time assessment strategies)

Skill	Teaching Strategies
Communication	Writing and presenting written and verbal reports Role plays Demonstrations Working in groups
Teamwork	Team or group projects Learning sets Group discussion Syndicates Communities of practice
Problem solving	Case studies Simulations Investigative projects and research Using various problem solving tools and techniques Developing or designing models Problem solving in teams and networks Decision making activities
Initiative and enterprise	Brainstorming activities Designing innovative and creative practices and solutions Initiating change / designing change processes Simulation activities
Planning and organising	Research and data collection Developing action plans Planning and organising events Time management activities Goal setting activities and scheduling tasks Collecting and analysing information
Self-management	Development of portfolios Work plans Using log books to record time management skills and monitor own performance Career planning exercises
Learning	Reflective journals log books, diaries Mentoring and coaching activities Self-evaluation tools

2. WHAT STRATEGY WORKS WHEN?

STRATEGY	WHAT DOES IT LOOK LIKE?	WHEN AND WHY?	HOW TO MAKE IT WORK
Direct instruction	Lectures Demonstrations Explanations without a great deal of student input	Demonstrating a skill or procedure Introducing knowledge students do not already know	Effective communication: tutor able to facilitate understanding, students engaged and listening Focus on clarity, structure, engagement
Whole class discussion	All students and tutor communicating about key knowledge, skills and ideas Respectful, stimulating conversation	Eliciting varying ideas Providing a forum for student input Allowing students to articulate their own ideas/findings	Planning and preparation by tutor/lecturer Setting protocols Listening and providing feedback Paraphrasing and maintaining focus
Small group work	Two or more students working together without direct intervention of tutor Cooperative learning	Providing a forum for students' input; developing independence Problem solving Students' social interaction, communication & cooperation	Planning and preparation Setting protocols Monitoring
Problem solving	Students engaged in working in groups or with tutor to solve real-world problems Learning occurs through solving problems as opposed to solving problems using existing knowledge	When there is no one 'right' answer Developing deeper understanding of a concept or topic Teaching students valuable higher-order thinking skills	Use real-world problems Monitor students to ensure they are on the right track Planning and preparation
Case study	A real-life narrative (story) Students make decision or solve problems (not straight comprehension)	Encourage deep understanding and critical thinking skills Add real-life dimension to learning (relevance)	Prepare students in advance Provide guidelines Use in conjunction with class discussion Preparation and planning
Role-play	Unrehearsed dramatisation of a situation or concept Act out characters, skills, occupations, non-living things or processes Students learn information and then interpret	Enhancing social interaction Developing deeper understanding Realism and application of knowledge	Motivating students and making them feel included Providing social support Giving students practice time Preparation and planning

From Killen, R. (2009). *Effective teaching strategies: Lessons from research and practice* (5thh ed.). South Melbourne: Cengage Learning.

3. OTHER STRATEGIES AND ACTIVITIES

(Note that many of these are complex and require a great deal of planning. They may even represent the structure of a course.)

TYPE	ACTIVITY
Large class settings	Audience response systems (for example, clickers) Think-pair-share
Online settings	Discussion boards Chat / virtual classrooms (for example, using Collaborate) Facebook groups Twitter
Student presentation	Seminars Demonstrations Viva voce Peer teaching
Group work	Buzz groups Think-pair-share Syndicate groups Problem-solving groups Jig-saw Learning cells Reciprocal questioning

CURRENT TEACHING AND LEARNING ACTIVITIES

An evaluation sheet for course designers

week & topic	alignment	out-of-class activities	activities and modes	sequence
	Do the current teaching and learning activities align with the course learning outcomes and the assessment tasks?	Are out of class activities considered?	Are the types of activities and their modes appropriate? Are there better alternatives (e.g. flipped classroom)? Consider also the development of academic literacies.	Is the sequence supportive of the development of students' learning skills, and deep undersanding?
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12				
13				

comments:

ACADEMIC LITERACIES

A brief information sheet for course designers

WHAT IS ACADEMIC LITERACY?

- Understanding how knowledge is made and how it can be transformed
- Engaging with the ways of knowing, thinking and communicating that are valued in a particular discipline (e.g. saying it in science is different to saying it in literary theory)
- Recognising when information is needed and having the capacity to locate, select, evaluate and effectively employ appropriate information

ACADEMIC LITERACIES IN PRACTICE

Research Processes
Locating, recognising and evaluating & managing information

Critical Thinking
Analysis to evaluate / critique / discuss…
Forming an argument from evidence

Constructing 'knowledge'
Active, independent learning
Developing and defending a personal stance

Forming an argument
Using evidence effectively to create and support an argument

Reading & Writing
Rhetorical purpose & style of text
Conventions of language, e.g. subjective / objective; tense; formality
Structural conventions, e.g. lab report / marketing report
Synthesis and integration of evidence in writing (& referencing)

Collaborative Learning
Communication, negotiation, conflict resolution

Verbal Presentations
Structure, content, visuals and verbal communication

EXAMPLES FROM THE LITERATURE

Quiz to teach & test research skills (Lambert & Yanamandram, 2004), University of Wollongong, Australia

AL Adviser/Discipline specialist collaboration (Jacobs, 2005), Cape Peninsula University of Technology, South Africa

Critical review tutorial tasks & portfolio (Saltmarsh & Saltmarsh, 2008), Macquarie & Charles Sturt Universities, Australia

Restructuring of course (WSIA & 5 lectures) (Tolhurst, 2007), University of New South Wales, Australia

ALIGNING TEACHING AND LEARNING ACTIVITIES

A design sheet for course designers

Refer to PART B of your Alignment of Assessment Tasks design sheet. We are simply adding in weekly outcomes and teaching strategies to match. Please see list of strategies in the Brief Guide. Alter the sheet to suit your needs.

week & topic	weekly learning outcome/s	teaching and learning activities	course outcome/s	assessment task/s
	At the end of this week, students should be able to …	… through participating in the following activities (in- and out- of class) *	… contributing to the following course outcomes	Knowledge and understanding (and skills) gained in this week will contribute to the successful completion of the following task/s **
1				
2				
3				
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12				
13				

* Fink's Castle-Top diagram (link provided) will help you to map these out.
** Consider also the development of academic literacies (planning sheet provided)

comments:

ACADEMIC LITERACY • Construction of knowledge • Communication of knowledge • Transferability of skills • Authenticity of outcomes	**(A) Expected entry level** What can I reasonably expect students to understand in week 1 of the course?	**(B) AL Introduction** How will this AL be illustrated, modeled, deconstructed for S's to understand?	**(C) AL Development** In what ways will S's be able to safely practice this AL? How will feedback be given?	**(D) Desired outcome** What do I want S's to be able to do by the time they leave my course?	**(E) Role in assessment** How is this AL involved in assessment? How will this be communicated to S's? What weighting will be given to demonstration of AL?

Writing a Project Report (PR)
 	
To write a PR in an appropriate structure, using language in the same way that professional reports do.
	• *That PR are an important part of professional life.*
	• *That PR have standard sections/headings/format.*
		i) Lecture wk 4: a PR to be shown which is relevant to the content being taught. ***Significance*** *of PR to be emphasised, including reference to commonly used headings****, reasons*** *for these, some* ***typical features*** *of language used.*
		
		This to be ***integrated with*** *explanation & discussion of* ***content****. As appropriate, these ideas to be referred to again in subsequent lectures/tutorials.*
			ii) In tutorials: to ***deconstruct*** *a PR to understand what is expected in each section, and analyse the* ***language*** *used. + exercises for S's to work on in tutorials (with discussion & feedback)*
			
			iii) On Bb: ***annotated models*** *available, and a quick quiz to test understanding of the genre. Quiz to offer* ***feedback*** *for all answers, referring to the annotated examples.*
				• *Structure a PR correctly (using appropriate headings & format)*
				• *Categorise content within the appropriate sections of the report*
				• *Use language appropriately, including:*
				  ○ *Formality of register*
				  ○ *Clarity of sentences*
				  ○ *Connection of ideas*
				  ○ *Use of tense*
					AT2 Project report, due week 8
					
					In addition to demonstrating understanding of key concepts & theories, and applying this to a case-study, 25% of the score for this AT is based on the three AL outcomes in column D.
					This will be clearly shown in the marking criteria in the course outline, as well as being communicated in lectures & tutorials (particularly those in which the AL is being taught).

Evaluation strategy



COURSE EVALUATION STRATEGY

A brief information sheet for course designers

"Doing good evaluation is like doing good research. In both cases, you are trying to answer some important questions about an important topic. The key to doing both activities well is (a) identifying the right questions to ask and (b) figuring out how to answer them." (Fink, 1995)

PLANNING FOR EVALUATION

Brookfield's Four Lenses (from *Becoming a Critically Reflective Teacher*) is a very well known and used. In a nutshell, he says that a critically reflective teacher uses four lenses through which to view their work – themselves, their students, their peers and available literature (theoretical or not).

In evaluating a course, it is recommended that you develop a strategy, focusing at key times on key things. It is important also that you use a range of instruments/approaches as these will give you different types of information to carry out that evaluation.

STUDENTS

We are used to receiving evaluation on our courses by way of student feedback through Student Feedback on Course (SFC) instruments. But there are many other complementary ways to evaluate the quality of a course.

In the first place, student surveys are only one source of information, and whilst their feedback is important, it cannot really tell us everything we need to know about the quality of a course from students' perspectives. Students can give us much better feedback, though, if we plan for it well! One way they already give us feedback is through the quality of their work. That is by assessing student we are evaluating tour course!

When you do plan to get feedback from students evaluating your course, focus the questions and frame them well so that the evaluation is accurate and useful. You should also time the evaluation well: if time has passed between an event and the time you ask students for their evaluation (for example, a lecture), they may be likely to give you an evaluation that is not reliable.

Some ways you can get feedback on your course from students

- Assessment submissions and feedback given
- In-class questioning
- Minute papers and other anonymous (short) surveys
- Focus groups
- Interviews

CTL offers all staff at the University Mid-Semester Formative Evaluation. The Mid-Semester Feedback (Formative Evaluation) Initiative provides teaching staff with an informal method of collecting student feedback on their teaching and on other aspects of the class while there is time to make adjustments to teaching. A confidential evaluation plan is devised through one-on-one consultation with the academic, and can include collection of feedback on teaching and the class, either through an in-class paper-based evaluation, an online evaluation, or a focus group with the students. The student feedback is provided to the staff member who then has the opportunity to implement change, as appropriate to their teaching/course.

PEERS

Peer review of teaching is the usual name we give to arrangement whereby one staff member reviews and advises (evaluates) another's teaching. Often used for teaching (face-to-face lectures, for example) it is just as useful for course evaluation. There are many models or frameworks associated with peer review of teaching, but they all have something in (more or less) common, and that is the process.

- ↓ Set goals (define what is to be reviewed and why)
- ↓ Develop strategies (figure out how to go about the review)
- ↓ Carry out the evaluation
- ↓ Make decisions based on the evaluation
- ↓ Put them into practice

With peer review, you can opt for a mentor-mentee relationship (for example, you may know someone who has particular expertise in an area you would like to improve), a peer-peer relationship (you can work with one another in a reciprocal fashion), or a strategic relationship (you could work with someone in order to develop closer connections).

LITERATURE

There is so much written on higher education teaching theory and course design! Using key literature will help you focus on what is important on course design and develop strategies for course evaluation. Ask CTL if you would like some guidance in finding helpful resources.

SELF-EVALUATION

Of course you can be your own harshest critic! Plan for strategic self-evaluation at times throughout the course so that you are not trying to remember what happened at particular points. For example, after the first assessment task, you might ask yourself a series of questions to help you figure out if it was effective. You may have changed an item for a particular reason, and need to reflect on whether or not that change was a good one. You can use the evaluation sheets provided, or create your own, depending on what you want to know.

STUDENT FEEDBACK ON COURSES

SFC QUESTIONNAIRE

Students are asked to indicate their level of agreement with the following 15 statements using a 5 point scale: Strongly disagree- 1, Disagree- 2, Uncertain- 3, Agree- 4, Strongly Agree- 5.

1. SUPPORT: The teaching staff were available to assist me with my learning.
   Note: Teaching staff made themselves available, you knew how to contact them for guidance and you felt encouraged to approach them when you needed help.

2. LEARNING ACTIVITIES: The activities of this course motivated me to learn.
   Note: Consider lectures, tutorials, labs, etc., and the interactions and activities that occur within them; and learning activities conducted outside of formal classes and assessments, such as on-line elements and practicum/placements.

3. TEACHING: The quality of teaching in this course helped me achieve the learning objectives.
   Note: Quality teaching occurs when knowledgeable, organised and enthusiastic teaching staff communicate effectively to, and interact positively with, students. This includes lecturers, tutors, laboratory staff and others who are actively engaged with students learning.

4. EXPECTATIONS: I was clearly informed about the learning objectives of this course.
   Note: Learning objectives are what you would be expected to know, understand or be able to do at the completion of a course.

5. ASSESSMENT: The assessment items were clearly related to the learning objectives.
   Note: Assessments explicitly measured your achievement of the learning objectives. The assessment methods were relevant to the learning objectives.

6. CRITERIA: The criteria for all assessment items were made clear.
   Note: Assessment criteria state in clear and simple language what you are required to do in order to achieve a particular grade.

7. FEEDBACK: I received feedback that was helpful to my learning.
   Note: Feedback includes written or oral comments on learning progress and assessments. Feedback is most useful when it is timely.

8. STRUCTURE: The various components of this course were linked in ways that supported my learning.
   Note: Components means lectures, tutorials, laboratories, online elements, practicum and other forms of learning and instruction. Material is linked where the parts are related and integrated, do not contradict each other, and are consistent.

9. RELEVANCE: I am able to apply my learning from this course to my wider goals.
   Note: Students often learn best when they can see the relevance of a subject or skill they are learning to their wider goals, or other contexts of specific interest to them.

10. ORGANISATION: Overall, this course was well organised.
    Note: Organised means co-ordinated, planned and orderly, and it could refer to the organising of timetables, resources, course outlines, assessment outlines, student support systems or other aspects of a course.

11. RESOURCES: The resources for this course helped me achieve the learning objectives.
    Note: Consider teaching spaces and the equipment available in them, library resources, on-line resources, study materials provided to you such as course outlines and lecture notes.

12. CHALLENGE: This course challenged me in ways that extended my learning.
    Note: Challenge can mean high expectations and degree of difficulty, as well as testing one's values, assumptions and beliefs. Perceptions of challenge can be affected by your previous learning and experiences.

13. OUTCOMES: My knowledge and skills have developed as a result of studying this course.
    Note: You are satisfied with the level of development of your knowledge and skills as a result of studying this course. You believe the course has met its learning objectives.
14. SELF EVALUATION: I made a consistent effort to succeed in this course.
    Note: You willingly prepared for and followed-up on the learning experiences offered in this course.

15. SATISFACTION: Overall, I am satisfied with the quality of this course.

Students also have the opportunity to provide comments regarding their course experience in a number of open-ended questions.

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COURSE EVALUATION STRATEGY

An evaluation sheet for course designers

For each, write down your current evaluation practices. Can they be improved? How?

STUDENTS

FOCUS AND REASON

METHOD

FREQUENCY

TIMING

QUALITY

COLLEAGUES/PEERS

FOCUS AND REASON

METHOD

FREQUENCY

TIMING

QUALITY

LITERATURE

FOCUS AND REASON

METHOD

FREQUENCY

TIMING

QUALITY

SELF

FOCUS AND REASON

METHOD

FREQUENCY

TIMING

QUALITY

COURSE EVALUATION STRATEGY

A design sheet for course designers

week	focus of evaluation	what i hope to learn	method of evaluation	comments
	What would you like to know about?	Why do you want to know about it?	How will you carry out the evaluation?	What other considerations are there?
1				
2				
3				
4				
5				
6				

7				
8				
9				
10				
11				
12				
13				

Comments:

CTL COURSE DESIGN WORKSHOPS - AN OVERVIEW OF SESSIONS

> Please note, that sessions can be tailored to the needs of the group – the following descriptions are a guide only

LEARNING OUTCOMES

In this session, participants will be able to analyse existing course objectives with a view to developing effective intended learning outcomes for students. Effective learning outcomes are student-focused, express how students will demonstrate their learning, and reflect an appropriate level of learning within the context of a program. Writing effective learning outcomes is the first step in the course design process, which focuses on clear alignment between course objectives, assessment, and teaching and learning activities.

ASSESSMENT

Participants will have the opportunity to examine, discuss and evaluate a variety of assessment types (formative, summative, etc.), forms (such as essays, projects, oral presentations, etc.) and modes (group tasks, individual tasks, online tasks, etc.). While ensuring alignment with course learning outcomes, participants will be guided through making decisions about the most effective assessment processes for their course.

Participants can investigate examples of online assessment practices to evaluate their effectiveness for their course. This may include use of Blackboard and other media, with the assistance the BOLD Lab and the e-Teaching Team as required.

The development of marking criteria, standards and rubrics can be made a key focus. Participants can evaluate current marking schemes, and re-design these in ways that: set appropriate standards for student work, informing teaching and learning activities; guide student learning; provide valid and reliable measures of student achievement; assist with giving accurate and useful feedback to students; and, provide course coordinators with a useful evaluation tool.

FEEDBACK

In this workshop participants will have the opportunity to examine and evaluate aspects of good quality feedback given to students about their learning, and incorporate this into their course design. A significant emphasis is on formative feedback, which has a focus on developing students' capabilities rather than simply reporting on submission quality. The use of online feedback mechanisms can be made a focus, with the assistance of the BOLD Lab and the e-Teaching Team as required.

INTEGRATING ACADEMIC LITERACIES AND GRADUATE ATTRIBUTES

The integration of the development of academic literacies is particularly important for first year courses, but should also be a focus, at appropriate levels, for disciplinary learning throughout a program. Integrating graduate attributes is an essential concern for all years of a degree program. This workshop will focus participants on examining the kinds of academic skills needed for success in their course, or program graduate attributes, and designing the course such that these are developed alongside the learning of content. Mapping graduate attributes to assessment and learning activities is an important aspect.

TEACHING AND LEARNING ACTIVITIES

Following principles of constructive alignment, participants will have a chance to examine current teaching and learning activities, such as lectures, tutorials, labs, in order to evaluate their effectiveness for students' success in meeting intended learning outcomes. They can develop a planned sequence of learning experiences offering variety and depth to learning in their course. A range of teaching strategies will be

considered, including the use of technology in the classroom and online. This may include the specific assistance of the BOLD Lab and the e-Teaching Team as required.

EVALUATION

Participants can consider a variety of evaluation mechanisms for their course, and plan for their strategic use for seeking information about student learning in their course. This will include the use of informal and formal instruments, designed to obtain quantitative and qualitative data about the effectiveness of the course with a view to its continuous improvement.

> Please contact **the Centre for Teaching and Learning** (ctl@newcastle.edu.au) if you wish to discuss tailoring a CTL course design workshop for your group.

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