A guide to Learning Outcomes

About this guide

This guide is designed to help you devise course-level and program-level learning outcomes that you find appropriate for your discipline and useful in terms of (a) assignment design, (b) course design, (c) developing grading criteria, (d) the grading process itself, and (e) assessment/assurance of learning.

Writing usable learning outcomes is harder than it appears at first glance, so among other things, this document aims to demystify the process.

> *This guide is modeled after one I created for Birmingham City University in the UK in 2002; in working with individuals and program teams to develop and revise learning outcomes in the UK and USA since then, I have observed common pitfalls, technical errors, and misconceptions around learning outcomes that I hope to address in these pages. Some of the content is therefore my own interpretation of how to ensure that learning outcomes in the first instance are helpful in revealing to us, as educators, the areas of our courses and programs that merit greater attention to promote learning, and at the same time provide what the university needs for the assurance-of-learning process.*
>
> *After a brief definition, this guide discusses common criticisms and potential benefits, compares course- and program-level issues, then explains how to write good outcomes that will genuinely work for you.* ***Jump around this guide as you see fit.***

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What are Learning Outcomes?

Learning outcomes tell us what all successful students will achieve by the end of a program or course. In other words, they are the specific intentions of a program or course, written in specific terms.

"Successful" here means that the student has *passed* the program or course. Learning outcomes are therefore written at the threshold level of a bare pass, not at the level of a top grade. In that way, we can be confident that all students who leave us with a degree qualification – even if only by the skin of their teeth – have met the outcomes we have identified for our programs.

Common criticisms of Learning Outcomes

If the idea of learning outcomes makes you uneasy, you might want to consider the common criticisms below and my own responses before getting into the detail. Otherwise, go directly to page 3.

Learning outcomes have many detractors and are contentious across higher education around the world. Much of this criticism is justified when we look at *how* learning outcomes are often written and how assurance-of-learning processes are implemented.

Criticism #1: DUMBING-DOWN: Writing learning outcomes at the threshold level means that students will be aiming only to pass the course, not to excel.

- If anything, the opposite is true: Expressing outcomes at the level of an A denies students the possibility of engaging their ingenuity and creativity to excel; it would mean that far more students would be coming away with an A-grade for mediocre work.
- We can help students aim to excel by developing broadly phrased grading criteria (but not a detailed grading scheme) for our assignments. These help students see where they should be aiming but are not so mechanistic as to give the game away entirely and cheapen the quality of a university degree.

Criticism #2: UNIFORMITY: Students bring different perspectives and experiences with them, so we can't expect them all to achieve the same uniform outcomes.

- It is true that we can't expect all students to achieve the same *grade*. As educators, we all have to judge students' levels of performance, which then leads to grades. Learning outcomes, however, are different from grades: they simply state the *minimum* requirements students must meet in order to *pass*. The extent to which students perform above that level determines the actual grade.
- Learning outcomes are specifically a *snapshot* of student performance during a course or program. They do *not* assess the distance travelled by students in their learning over the duration of the course/program.

Criticism #3: PRESCRIPTIVENESS: Learning outcomes do not allow for course flexibility or for the unintended learning that varies from group to group.

- Learning outcomes only become overly prescriptive if we have written them too narrowly ourselves, or if we have created too many. So the important thing for us as faculty is to make sure that the outcomes for our courses and programs address only the absolute essentials, and that they are loose enough to give us a degree of flexibility in terms of how students will meet them.
- If you have a broader set of outcomes that you *hope* students will achieve in your course, then you can still mention those in your syllabus as, say, "learning goals," but not as formal learning outcomes.

Criticism #4: MANAGERIALISM: Learning outcomes are an inappropriate application of managerialist, neoliberal principles to student learning, a domain which is unsuited to such simplistic measurement.

- Yes, the learning outcome agenda arose as part of the increased scrutiny of higher education through tighter accreditation processes as part of a more business-oriented framework. (These processes are still far less stringent in the USA than in other English-speaking countries; if anything, we can expect further increases in requirements and oversight in future.)
- The key for us as educators is to ensure that we devise learning outcomes that (a) are appropriate for our disciplines and (b) genuinely focus on our students' learning. If we feel confident that we have done that, then assessment becomes more valuable for our departments and programs, since it is clearly evaluating things that *we* see as important.

Criticism #5: SHORT-TERMISM: Alumni tell me they do not appreciate the full impact of my course or program until five to ten years after they graduate. Learning outcomes cannot measure the real impact.

- This is completely true. Learning outcomes do not measure the long-term impact of a course or program. Nor does regular grading; we do not grade assignments based on whether the penny might drop in five years, but based on the pieces of work students submit during their studies. We can still hope, though, that our students continue to be influenced by their Seattle University education after they leave us. We just don't need to quantify it or write a report about it.

Potential benefits of learning outcomes

If written well (a big caveat!), then learning outcomes lead to a more learning-centered approach: They mark a shift from the content of a program or course (namely, what faculty teach) toward its outcome (in other words, what a student is able to do on successful completion of the course or program).

Learning outcomes can:
- help faculty focus on exactly what they want students to achieve in terms of knowledge and skills.
- help guide students in their learning in that they alleviate concerns about what they need to do to *pass*, in turn helping them to succeed in their studies.
- provide a useful guide to inform potential students, parents, graduate programs, and graduate employers about the general intellectual and practical skills that a graduate will possess.

Well-written, clear, and focused learning outcomes also greatly simplify course and program assessment practices. At the program level, assessment reports are more likely to become genuinely useful documents that help faculty enhance their programs and boost student learning.

Learning outcomes at the program level

When writing program learning outcomes, bear in mind the university's Undergraduate or Graduate Learning Outcomes so that your program is pitched at the appropriate level of intellectual challenge.

Programs at Seattle University need to specify learning outcomes that will then be assessed one-by-one in a five-year cycle. This means that a program should have *no more than five learning outcomes* to be manageable.

Since these outcomes must be achieved by *all* graduating students from the program, expect them to be attainable through the *required* courses of the program. This means that, ideally, the program outcomes are identical to *course* learning outcomes for individual upper-level, required courses in the program (e.g. "Program Outcome #2 is achieved in the senior capstone course; Program Outcome #3 is achieved in the upper-level research methods course.")

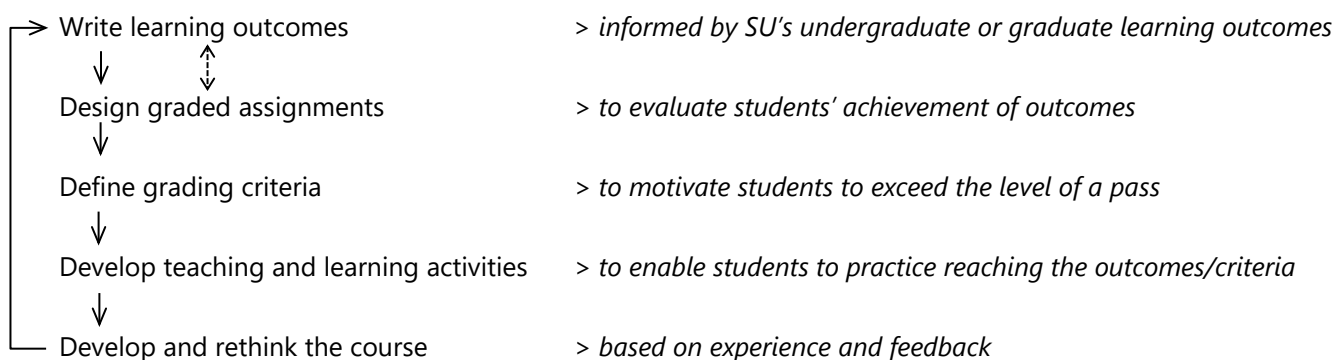# Learning outcomes at the course level

Unlike program outcomes, there is greater flexibility over course learning outcomes. It's still worth bearing in mind that *all* learning outcomes for a course need to be graded, so having fewer, more focused outcomes helps keep a course workload more manageable both for students and for faculty. Our general CETL recommendation is to write between four and six outcomes for courses on the quarter system, and between four and eight for those on semesters. If in doubt, write fewer learning outcomes for your course, not more. (See "Whittling down the curriculum" below.)

The idea is then that your graded assignments (and subsequently grading criteria) are directly aligned with the learning outcomes so that students can demonstrate meeting the outcomes through graded work. Once you

have worked out the learning outcomes and graded assignments for a course, you're then ready to decide what learning and teaching activities to use in your classes; these activities are then specifically intended to help students practice the intellectual and practical skills they need in order to complete the assignments successfully and thereby attain the learning outcomes for the course.

Again, the outcomes process ideally helps us focus on student learning, rather than on our teaching. This alignment between learning outcome, learning and teaching activities, assessment tasks and assessment criteria makes the whole process transparent to students, and helps you ensure that there is coherence in your course. The process is called "constructive alignment" or "backward design" in the literature.

My experience has been that when designing a course from scratch, many of us go through an iterative process of refining outcomes and graded assignments before considering learning and teaching activities.

Write learning outcomes > *informed by SU's undergraduate or graduate learning outcomes*

Design graded assignments > *to evaluate students' achievement of outcomes*

Define grading criteria > *to motivate students to exceed the level of a pass*

Develop teaching and learning activities > *to enable students to practice reaching the outcomes/criteria*

Develop and rethink the course > *based on experience and feedback*

Whittling down the curriculum

Your learning outcomes will need to specify the *minimum* acceptable standard for a student to be able to pass a course or program (threshold level). This means that it is important to express learning outcomes in terms of the *essential* learning for a program or course, so it's best to have a small number of learning outcomes that are of central importance, not a large number of peripheral outcomes.

Most of us find we have more items that we would like to include than would be manageable as outcomes. To whittle that list down, it helps to categorize them as topics or skills that students *must* know to pass the course, *should* know, or *could* know, as shown in the graphic. In all likelihood, only items in the "must know" category will become learning outcomes. The other items may be ones that would help differentiate student work at the level of a pass from that at a higher level.

Could know

Should know

Must know
(i.e., learning outcomes)
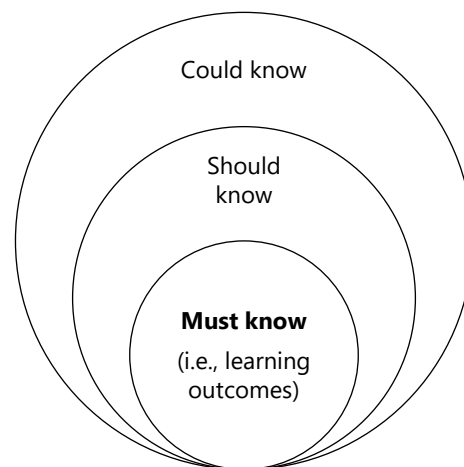
Prioritizing course content.
Adapted from Thomas, Davies, Openshaw, & Bird (1963/2007, p. 42).

Writing learning outcomes

Sentence stem

Start **program learning outcomes** with the sentence stem:
　"On successful completion of this program, you will be able to …"

Start **course learning outcomes** with the sentence stem:
　"On successful completion of this course (i.e. by passing this course), you will be able to …"

Note that the learning outcomes address students *directly* using the second person "you." This makes them more immediate to learners and suits a learning-centered approach.

Action verbs

The sentence stems also lead you to use **action verbs** that show what students are able to *demonstrate* that they have learned or achieved the outcome.

To help you write your outcomes, you can use the revised version of **Bloom's Taxonomy** on page 7. The idea behind the taxonomy is that tasks become increasingly intellectually demanding as you move to the right (hence the representation as a staircase), with "create" being the most demanding category.

(Bloom's Taxonomy is simply an organizing structure and examples of verbs that save you the trouble of finding your thesaurus. It's helpful not only for writing outcomes, but also for designing assignments.)

Selecting action verbs that will help you and your students

All six levels of the taxonomy can be used at ALL educational stages. As students progress through their programs, the issues they address in assignments steadily become more complex. (Imagine increasingly deep stairs on the Bloom's Taxonomy "staircase.")

Be aware that the bottom two levels (*remember, understand*) are undemanding and often tedious – both as a learner and as a professor with a pile of grading. Assignments at the lower levels of the taxonomy are also more likely to be viewed by students as "busy-work," which can in turn demotivate learners.

If you ask students to fulfill the four higher levels (*apply, analyze, evaluate, create*), then they will necessarily have attained the lower levels. In other words, writing outcomes at those four higher levels means that the lower two are automatically incorporated. (For instance: An acting student will necessarily need to know her lines in a play in order to create a credible performance. Students must have understood Keynesian economic theory in order to apply it appropriately to a given scenario. In a graded assignment, you can also require students to explain something in their own words *before* they move onto the applying, analyzing, evaluating, or creating, but the relevant outcome need only refer to the highest level.)

Not all verbs on the taxonomy will work as outcomes. Verbs about basic cognition (e.g. know, understand, comprehend, appreciate, recognize) cannot easily be assessed through assignments. Studies have found that students are quite capable of giving the *impression* they understand or know something, but without being required to demonstrate it beyond memorizing or paraphrasing, we can't be sure that they are able to apply the knowledge to new situations. Again, writing outcomes at higher levels of the taxonomy enables you to verify that students genuinely *do* understand the material.

Verbs about processes (e.g. develop, acquire, improve, enhance, grow) are also problematic because learning outcomes represent a snapshot of attainment, not the distance travelled to reach that point. Focus on the minimum end-point you want all your students to reach.
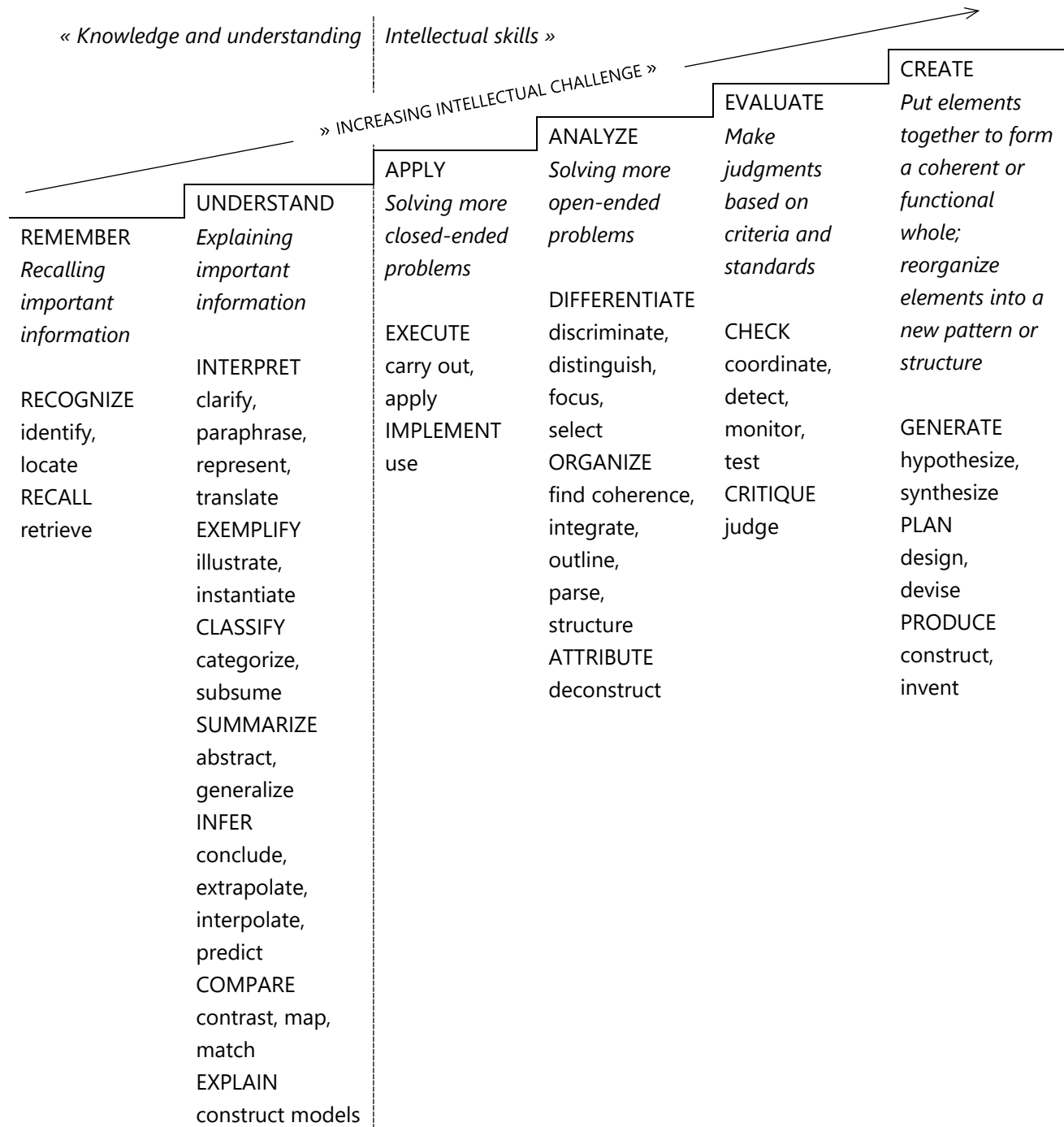
Keeping it manageable

Try to use only one verb per outcome to keep the grading and assessment process straightforward and focused. The more components you add to an outcome, the more difficult it becomes to show whether students have attained the entire outcome. This is one of the typical technical errors that make learning outcomes and their assessment feel unhelpful, time-consuming, and like a box-checking exercise.

Common errors and suggested remedies

» Common error #1: Writing learning outcomes at the aspirational level of an A grade.
   Instead: Write them at the level of the lowest passing grade.

» Common error #2: Writing learning outcomes at the bottom of Bloom's Taxonomy for introductory courses.
   Instead: Aim as high up Bloom's Taxonomy as possible for the course, bearing in mind that the issues under discussion are less complex or nuanced than in more advanced courses.

» Common error #3: Writing learning outcomes using verbs about cognition, like "know" and "understand."
   Instead: Focus instead on how students will demonstrate *that understanding in assignments.*

» Common error #4: Writing learning outcomes using verbs about process, like "develop" and "improve."
   Instead: Focus instead on the end point all students need to reach, not the route they take to get there.

» Common error #5: Writing learning outcomes so broad as to be ungradable.
   Instead: Try to use just one verb per outcome and to be relatively specific about the topic it relates to.

» Common error #6: Writing learning outcomes so specific as to be inflexible.
   Instead: Allow yourself some wiggle-room so that you can, for instance, change the nature *of an assignment that will demonstrate students' learning (e.g. changing from a presentation to a paper, from theory X to theory Y).*

2001 Revision of Bloom's Taxonomy of educational objectives: cognitive domain (1956)

Comments in *italics* are our own brief explanations of the differences between the six levels of the taxonomy. The list of verbs here is not exhaustive, and some verbs appear under more than one heading.

« Knowledge and understanding   *Intellectual skills »*

» INCREASING INTELLECTUAL CHALLENGE »

REMEMBER	UNDERSTAND	APPLY	ANALYZE	EVALUATE	CREATE
Recalling important information	*Explaining important information*	*Solving more closed-ended problems*	*Solving more open-ended problems*	*Make judgments based on criteria and standards*	*Put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure*
RECOGNIZE identify, locate	INTERPRET clarify, paraphrase, represent, translate	EXECUTE carry out, apply	DIFFERENTIATE discriminate, distinguish, focus, select	CHECK coordinate, detect, monitor, test	
RECALL retrieve	EXEMPLIFY illustrate, instantiate	IMPLEMENT use	ORGANIZE find coherence, integrate, outline, parse, structure	CRITIQUE judge	GENERATE hypothesize, synthesize
	CLASSIFY categorize, subsume		ATTRIBUTE deconstruct		PLAN design, devise
	SUMMARIZE abstract, generalize				PRODUCE construct, invent
	INFER conclude, extrapolate, interpolate, predict				
	COMPARE contrast, map, match				
	EXPLAIN construct models				

Anderson, L. W., & Krathwohl, D. R., with Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., Raths, J., & Wittrock, M. C. (Eds.). (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. Abridged Version. Longman.

Examples of learning outcomes from various disciplines

If you see an outcome here that feels pitched at the right level of intellectual challenge, try swapping the content details with details from your own subject; the outcome will likely work for you. These examples are organized under (a) knowledge and understanding (i.e. rather boring for students and for faculty), (b) intellectual skills, (c) discipline-specific skills, and (d) transferable skills.

Examples marked with an asterisk (*) are intentionally bad, so that you can see what problematic outcomes might look like.

On successful completion of this course (i.e. on *passing* the course), you will be able to:

OUTCOME/DOMAIN	*DISCIPLINE*

Knowledge and understanding (NOT RECOMMENDED: THESE ARE GENERALLY TEDIOUS FOR STUDENTS AND FOR YOU)	
• identify the theories of learning that are implicit in your current approach to higher education.	*Education*
• discuss Romantic poetry in relation to the major themes of Romanticism.	*Literature*
• describe the underlying principles governing gene transmission and expression.	*Health sciences*
• explain the evolution of a landscape from its pre- to post-industrialized state.	*Built environment*
• *comprehend the fundamental concepts of structural, mechanical, and electrical engineering. [BAD EXAMPLE: too broad, unassessable verb]	*Engineering*
• *state the six categories in Bloom's Taxonomy. [BAD EXAMPLE: too narrow, dull]	*Education*

Intellectual skills (apply, analyze, evaluate, create)	
• organize your information to demonstrate philosophical affinities and variances between Kabbalah and Sufism.	*Religious studies*
• use Labelling Theory to explain a mental health case study.	*Psychology/Health*
• appraise the key drivers in market segmentation in a tech industry case study.	*Marketing*
• create criteria to assess Homeland Security implementation of immigration law.	*Law/Political science*
• apply principles of Ignatian Pedagogy to the design of a teaching program.	*Education*
• apply statistical and numerical principles to solve a thermodynamic problem.	*Engineering*
• assess the suitability of various painting techniques for a specific environment.	*Fine art*
• compare Hofstede's approach to culture with that of the GLOBE study.	*Management*
• illustrate, using phonetics, the issue of sigmatism in children.	*Speech pathology*
• analyze the theme of *Vergangenheitsbewältigung* in post-WW2 German novels.	*Literature*
• evaluate different performers' approaches to Baroque ornamentation.	*Music*
• design a piece of software that conforms to specified criteria.	*Computer science*
• plan an experiment to test the adhesive properties of given chemical compounds.	*Chemistry*
• justify your allocation of scarce resources in treating patients in an ER setting.	*Nursing*
• appraise the usability and functionality of selected web design packages.	*Graphic design*
• devise a context-appropriate management plan for a client with aphasia to achieve a stated goal.	*Health sciences*

Subject-specific skills

• use web-creation tools to produce an interactive educational website for use by young children.	*Computer science*
• assess the validity of alternative market research techniques to support a proposed new product launch.	*Marketing*
• employ appropriate CAD skills to prepare a contour drawing of a site.	*Engineering*
• perform atonal and/or syncopated music accurately at sight.	*Music*
• present a legal submission on an ethical issue using a cogent argument in a law court setting.	*Law*
• undertake a standard medical examination, including taking a blood sample.	*Nursing*
• apply key methods and concepts in historical and historiographic analysis.	*History*
• demonstrate appropriate health and safety procedures when dealing with toxic substances.	*Natural sciences/ Fine arts*
• make evaluative judgments based on radiographical images.	*Diagnostic ultrasound*
• use laboratory and workshop equipment to generate data in a given setting.	*Lab-based courses*
• prepare full engineering plans for a self-designed energy conservation structure.	*Engineering*
• justify informed decisions on wards of court with respect to accepted social care protocols and the needs of the individual.	*Social work*
• record accurately the geomorphological features of a given setting.	*Earth sciences*
• *write, read, speak, and orally understand one Romance language at high or near-native levels of proficiency. [BAD EXAMPLE: too many components]	*Modern languages*

Key transferable skills   *Any discipline*

- express yourself in writing for different professional and academic audiences.
- communicate effectively in writing and orally.
- work effectively as part of a team.
- conduct yourself appropriately and effectively in a work-based setting.
- demonstrate cultural sensitivity toward others' perspectives and beliefs.
- evaluate reflectively your own learning and personal planning processes.
- demonstrate initiative through independent work.
- manage your resources and time.
- assess your own levels of performance and commitment to learning.
- apply relevant mathematical and statistical skills.
- Locate and appraise data from a range of online sources.
- use a spreadsheet application effectively at an advanced level.
- reference all sources consistently & accurately using the standard system for this field of study.

FURTHER REFERENCES

Gosling, D., & Moon, J. (2001). *How to use learning outcomes*. SEEC.

Moon, J. (2002). *How to use level descriptors*. SEEC.

Quality Assurance Agency (2001). *Credit and HE qualifications*. QAA.

Walsh, A., & Webb, M. (2002). *A guide to writing learning outcomes*. Learning & Teaching Development Unit, Kingston University.

www.seattleu.edu/faculty-development