# Short guide to writing intended learning outcomes for courses

When designing a course, many people start by considering *what* will be taught in a course. However, a more effective approach to course design is to align the different elements of a course, starting by considering course aims. Therefore, start by stating your (1) aims or course summary, (2) intended learning outcomes (ILOs), (3) assessments and (4) learning and teaching methods. This guide focuses on (2).

ILOs describe what a student should be able to do by the end of a course. Students will be assessed on whether they can demonstrate the ILOs and therefore they must be stated specifically and clearly. They should address one or more of the five characteristics of learning outlined in the principles of the Scottish Credit and Qualifications Framework (SCQF) at the appropriate SCQF Level:

* Knowledge and Understanding
* Practice: Applied Knowledge, Skills and Understanding
* Generic Cognitive Skills
* Communication, ICT and Numeracy Skills
* Autonomy, Accountability and Working with others

The University’s Learning and Teaching Strategy includes a commitment to the embedding, surfacing and articulation of the Skills for Success Framework. It is expected that students will have opportunities to develop the following Skills for Success within their programme, and reference to these skills within the ILOs is strongly encouraged:

* Problem Solving
* Curiosity
* Critical Thinking
* Communication
* Collaboration
* Reflection
* Adaptivity
* Inclusion
* Data and digital literacy
* Individuality

The ILOs should be achievable but require increased levels of knowledge, practice, skills, communication and autonomy as the students’ level of study increases.

ILOs are expressed using a stem (that gives a time limitation) followed by a statement that begins with an active verb (outlining what students will be able to demonstrate) + object (what is to be learned) + a qualifying phrase (that provides the context and degree of mastery expected). The following real examples of ILOs from across the University demonstrate how to write ILOs. These particular examples all demonstrate inclusion of SFS within the ILO.

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| **Example 1 (UG) Comparative Politics in a Globalized World**  On completion of this course, the student will be able to:   * Effectively communicate comparative political analysis in written and oral forms (SFS: communication) |
| **Example 2 (UG) Introduction to Mathematical Analysis**  On completion of this course, the student will be able to:   * Independently and critically formulate strategies for construction of mathematical arguments related to the course material, for example by breaking down a problem into easier pieces, explicitly identifying sub-problems, and then synthesising the results. (SFS: problem solving) |
| **Example 3 (PG Online) Pain – A multidimensional phenomenon**  On completion of this course, the student will be able to:   * Critically reflect on the ethical issues inherent in pain research and practice (SFS: reflection) |

## Things to consider when writing aims and ILOs:

* What knowledge, skills, values and attributes will your students bring to the course?
* What knowledge, skills, values and attributes do you want them to develop?
* What will students need to do to demonstrate that they have achieved the ILOs?
* Ensure that course ILOs are consistent with, and contribute towards, programme ILOs.
* Try to avoid using verbs such as *understand, appreciate, be familiar with,* and *know* in ILOs as these verbs do not clearly indicate what level of understanding or knowledge a student must demonstrate in an assessment. See Blooms taxonomy below on different levels of knowledge and understanding.
* It is fine to use the same active verb more than once in the ILOs for a course if it is expressing what you want students to be able to achieve.
* ILOs will be used by both staff and students, and should help to ensure clarity about the purposes and intended outcomes of courses.
* The [EUCLID system, where you submit a new course or a redesigned course](https://www.ed.ac.uk/student-systems/support-guidance/admin-support-staff/programme-course-maintenance/course-creation-approval-maintenance), will prompt you for 1-5 ILOs based on the 5 SCQF characteristics of learning.

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| **Try not to proliferate unnecessary ILOs - EXAMPLE**  Rather than writing:  ‘On completion of this course, the student will be able to:   * recognise the symptoms and devise an appropriate treatment plan for pneumonia * recognise the symptoms and devise an appropriate treatment plan for emphysema * recognise the symptoms and devise an appropriate treatment plan for acute bronchitis’   …consider writing:  By the end of this course you will be able to:   * recognize the symptoms and devise an appropriate treatment plan for a range of respiratory conditions (see Appendix A)   Then list the different respiratory conditions in Appendix A that you expect your students to recognise and be able to treat and any of which they may be assessed on. |

## Blooms Taxonomy

(Bloom et al, 1956)

## Active verbs for different levels of Bloom’s Taxonomy

|  |  |  |  |  |  |
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|  |  |  |  |  | **Evaluation** |
|  |  |  |  |  | judge | |
|  |  |  |  |  | appraise | |
|  |  |  |  |  | evaluate | |
|  |  |  |  | **Synthesis** | rate | |
|  |  |  |  | compose | compare | |
|  |  |  |  | plan | revise | |
|  |  |  |  | propose | assess | |
|  |  |  | **Analysis** | design | estimate | |
|  |  |  | distinguish | formulate |  | |
|  |  |  | analyse | arrange |  | |
|  |  |  | differentiate | assemble |  | |
|  |  | **Application** | appraise | collect |  | |
|  |  | interpret | calculate | construct |  | |
|  |  | apply | experiment | create |  | |
|  |  | employ | test | set up |  | |
|  | **Comprehension** | use | compare | organise |  | |
|  | translate | demonstrate | contrast | manage |  | |
|  | restate | dramatise | criticise | prepare |  | |
|  | discuss | practice | diagram |  |  | |
| **Knowledge** | describe | illustrate | inspect |  |  | |
| define | recognise | operate | debate |  |  | |
| repeat | explain | schedule | question |  |  | |
| record | express | sketch | relate |  |  | |
| list | identify |  | solve |  |  | |
| recall | locate |  | examine |  |  | |
| name | report |  | categorise |  |  | |
| relate | review |  |  |  |  | |

## Other sources of information and help:

QAA Subject benchmark statements – set out expectations and standards of degrees in the different disciplines:

<http://www.qaa.ac.uk/assuringstandardsandquality/subject-guidance/pages/subject-benchmark-statements.aspx>

The SCQF framework:

<http://scqf.org.uk/the-framework/about-the-framework/>

The Skills for Success Framework:

[Graduate Attributes and Skills for Success | Graduate Attributes](https://graduate-attributes.ed.ac.uk/)

## References

Bloom, B.S., Engelhart, M.D., Furst, E.J., Hill, W.H., Krathwohl, D.R. (1956) *Taxonomy of educational objectives: The classification of educational goals*. Handbook I: Cognitive domain. New York: David McKay Company. Also see Atherton, J.S. (2013) *Learning and Teaching; Bloom's taxonomy:* <http://www.learningandteaching.info/learning/bloomtax.htm>

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