Stream Learning Outcomes Writing Guide (UNSW Engineering)

This note provides guidance for writing SLOs. The SLOs need to link your curriculum with the PLOs, EA Competencies and UNSW Graduate Capabilities.

UNSW has advice on the writing of Learning Outcomes. These can be summarised as:

- Align to AQF and ICF
- Learning outcomes for each program/stream should encompass discipline-related and generic outcomes, including:
    - specific knowledge and skills and their application that characterise the disciplines involved
    - generic skills and their application in the context of the disciplines involved
    - knowledge and skills required for employment and further study related to the program, including those required to be eligible to seek registration to practise where applicable, and
    - skills in independent and critical thinking suitable for life-long learning (HESF 2015).
- Stream/program learning outcomes are developed under the headings of **knowledge, skills and the application of knowledge and skills**.
- There are no hard rules to the number of learning outcomes, though normally 4-10 is about right per program

UNSW Engineering advice

- Follow UNSW advice
- Let's aim for 8 SLOs per stream (not a hard rule so please don't think you need my approval to have more or less)
- Engineering has the benefit of having to consider the EA competencies as well, and the list below attempts to assist you do that
- We should also think of the UNSW Graduate Capabilities while writing the SLOs
- By being specific in what you want your graduates to do, you can more easily link to CLOS and Assessments in your curriculum mapping, and link to PLOS/EA competencies.

UNSW SLO Example for 3707

On successful completion of this program, graduates will be able to:

Knowledge

1. Show proficiency/mastery/expertise/aptitude/… of knowledge in the enabling sciences (list them: maths, computer science and physics say) that underpin [discipline X]
2. Demonstrate proficiency/mastery/expertise/aptitude/.. of [discipline X] specialist technical knowledge such as: (list them: examples: mechanics, thermodynamics, fluids, solids, …)

3. Critically evaluate and apply current research to the solution of complex problems in [discipline X]

Skills

4. Use appropriate analytical and computational tools (perhaps list them) to analyse complex problems in [discipline X]
5. Design and implement innovative engineering solutions and systems in [discipline X]

Application of Knowledge and Skills

6. Lead and manage [discipline X] projects, individually or as part of a team, in a systematic and professional manner
7. Apply nuanced professional judgement that contributes to the ethical and sustainable practice of [discipline X]
8. Communicate professionally and effectively within and outside of [discipline X]