UNIVERSITY OF CAPE TOWN
Department of Electrical Engineering
EEE4022F/S - Final Year Project
Graduate Attribute Tracking Form

Student name: _____   DP Awarded? [Y/N] _____

Student no: _____   Supervisor name: _____

Date: _____   Date: _____

Student signature:

_____

Supervisor signature:

_____

VERY IMPORTANT: Receiving DP for the course does NOT imply that all GA's have been met in the course. Assessment of GA's only happen in the final marking of the project report.

GA 1: Problem Solving

Student Response:

Supervisor Response:

GA 4: Investigations, Experiments, and Data Analysis

Student Response:
Supervisor Response:

GA 5: Use of Engineering Tools

Student Response:
Supervisor Response:

GA 6: Professional and Technical Communication

Student Response:

Supervisor Response:

GA 8: Individual Working

Student Response:
Supervisor Response:

GA 9: Independent Learning Ability

Student Response:
Supervisor Response:

Instructions:

Students must explain in this document what they **have already done** and what they **plan to do** to satisfy each Graduate Attribute. Descriptions of each GA is provided below. Supervisors respond to the student's plans and current progress, providing additional comments or advice as they see fit. Once the student's progress is deemed sufficient (a few weeks before submission at the due date for this form), supervisors indicate that DP can be awarded.

GA 1: Problem Solving

Identify, formulate, research literature and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences with holistic considerations for sustainable development.

- A systematic, theory-based understanding of the natural sciences applicable to the discipline and awareness of relevant social sciences.
- Conceptually based mathematics, numerical analysis, data analysis, statistics and formal aspects of computer and information science to support detailed analysis and modelling applicable to the discipline.
- A systematic, theory-based formulation of engineering fundamentals required in the engineering discipline.
- Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline, much of which is at the forefront of the discipline.

GA 4: Investigations, Experiments and Data Analysis

Demonstrate competence to conduct investigations of complex engineering problems using research methods, including research-based knowledge, design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.

Engagement with selected knowledge in the current research literature of the discipline, awareness of the power of critical thinking and creative approaches to evaluate emerging issues.

The balance of investigation and experiment should be appropriate to the discipline. Research methodology to be applied in research or investigation where the student engages with selected knowledge in the research literature of the discipline.

Note: An investigation differs from a design in that the objective is to produce knowledge and understanding of a phenomenon and a recommended course of action rather than specifying how an artefact could be produced.

GA 5: Use of engineering tools

Demonstrate competence to create, select and apply and recognise limitations of appropriate techniques, resources and modern engineering and IT tools, including prediction and modelling, to complex engineering problems.
- Conceptually based mathematics, numerical analysis, data analysis, statistics and formal aspects of computer and information science to support detailed analysis and modelling applicable to the discipline.
- Knowledge of engineering practice (technology) in the practice areas in the engineering discipline

A range of techniques, resources and modern engineering and IT tools appropriate to the disciplinary designation of the programme.

GA 6: Professional and Technical Communication

Demonstrate competence to communicate effectively, both orally and in writing, with engineering audiences and the community at large, taking into account cultural, language, and learning differences.

This course evaluates the long report component of this outcome at exit level. Material to be communicated is in an academic or simulated professional context. Audiences range from engineering peers, management and lay persons, using appropriate academic or professional discourse. Written reports (10 000 to 15 000 words plus tables, diagrams and appendices) should cover material at exit-level. Methods of providing information include the conventional methods of the discipline, for example engineering drawings, as well as subject-specific methods.

GA 8: Individual, Team and Multidisciplinary Working

Demonstrate competence to work effectively as an individual, in teams and in multidisciplinary environments. This course evaluates the **individual** working component of this learning outcome at exit level.

Knowledge of professional ethics, responsibilities and norms of engineering practice.

GA 9: Independent Learning Ability

Demonstrate competence to engage in independent learning through well developed learning skills.

Engagement with selected knowledge in the current research literature of the discipline, awareness of the power of critical thinking and creative approaches to evaluate emerging issues.

Operate independently in complex, ill-defined contexts requiring personal responsibility and initiative, accurately self-evaluate and take responsibility for learning requirements; be aware of social and ethical implications of applying knowledge in particular contexts.

- Openness to constructive feedback, awareness of own limitations, ability to cope with the discomfort of uncertainty and having access to a range of approaches, reflective selfevaluation, curiosity and proactive engagement, resilience, confidence to ask for help and draw from a broad range of stakeholders.
- Reflection of self-learning to begin to recognise if what has been covered meets the needs of the activity or task.