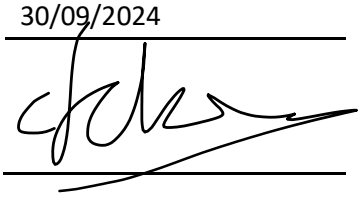
UNIVERSITY OF CAPE TOWN

Department of Electrical Engineering

EEE4022F/S - Final Year Project

Graduate Attribute Tracking Form

Student name:	Cameron Clark	DP Awarded? [Y/N]	Y
Student no:	CLRCAM007	Supervisor name:	Justin Pead
Date:	30/09/2024	Date:	30 Sept 2024
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: In this project, I have done significant research into the measuring techniques of salinity which involves a significant amount of chemistry and physical oceanography. Additionally, I have researched what these measurements are used for. After understanding this, I have developed a prototype salinity meter which uses electrical conductivity to measure resistance which required a good understanding of PCB and circuit design. I plan to further go on to code this device and implement the equations that are used to convert from conductivity to salinity.
Supervisor Response: I agree with the students assessment of the task and their progress to achieving the GA upon completion of their report.

GA 4: Investigations, Experiments, and Data Analysis

Student Response: I have design a electrical conductivity probe with the ability to perform tests with saline solutions. I have added two different electrode designs which allows me to test the effectiveness of each and additionally, it allows me to test the effect of electrical fringing in salt water and whether the relationship between conductivity and voltage of salt water is constant or not. Once these tests have been complete, it will allows me to analyse and calibrate the device and determine to what degree of accuracy I can measure salinity.
Supervisor Response: I agree with the students assessment of the task and their progress to achieving the GA upon completion of their report.

GA 5: Use of Engineering Tools

Student Response: PCB design and coding are the main two areas that I have used engineering tools. I designed the PCB using KiCad software and I plan to code it using VS Code and embedded C programming. Additionally, I will need to using circuit debugging tools including Multimeters and oscilloscopes. I have also used Git version control software to keep my project backed up.
Supervisor Response: I agree with the students assessment of the task and their progress to achieving the GA upon completion of their report.

GA 6: Professional and Technical Communication

Student Response: I have been writing a report throughout the process of this project and I will hand in a full report at the end of this report which will demonstrate my ability for professional and technical communication. Additionally, I will give an oral presentation on this project proving my verbal communication ability.
Supervisor Response: I agree with the students assessment of the task and their progress to achieving the GA upon completion of their report.

GA 8: Individual Working

Student Response: I have demonstrated in this project that I can work individually with research, design and development, and report writing. I have also attributed any research material or ideas that I have gotten to the relevant persons if they were not my original ideas.
Supervisor Response: I agree with the students assessment of the task and their progress to achieving the GA upon completion of their report.

GA 9: Independent Learning Ability

Student Response: I have done significant research and learning about salinity and physical oceanography. I have also completely designed a PCB which involved learning about different components while at the same time I have received advice and consulted with my supervisor about topics that I am unsure about.
Supervisor Response: I agree with the students assessment of the task and their progress to achieving the GA upon completion of their report.