Project (E) 448 Responsibilities & Student's GA Achievement Plan Ver2.1

This form must be filled out by the student, signed and handed in to the module administrator early in the semester. Both the student and the supervisor must sign the agreement on main details and mutual responsibilities. The student should discuss their GA achievement plan with the supervisor, before completing this form. Only the student signs their GA achievement plan, as it is their own responsibility. ***This plan is NOT a guaranteed recipe for passing Project (E) 448.*** *Rather, it serves as a record of the student having considered these important aspects at an appropriately early stage. GA achievement plans should be revised as needed and in consultation with the supervisor, during the course of the project.*

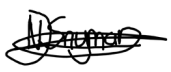
Main details

Student	Initials and surname	DN SNYMAN	SU number	22706852
Supervisor	Initials and surname			
Project title	Footstrike determination for runners			
Project description, including the aim, scope and envisioned approach *(max. 150 words)*	This project will use inserts for running shoes to determine foot strike patterns.Other metrics such as cadence and lef right balance will also be Measured. The data that is collected should be transmitted to a mobile device for display and storage.			

Mutual responsibilities

1. It is the responsibility of the student to clarify aspects such as the definition and scope of the project, the place of study, research methodology, reporting opportunities and -methods (e.g. progress reports, internal presentations and conferences) with the supervisor.
2. It is the responsibility of the supervisor to give regular guidance and feedback with regard to the literature, methodology and progress.
3. The rules regarding submission and evaluation of the project is outlined in the module framework and SUNLearn page and will be strictly adhered to.
4. The supervisor conveyed the departmental view on plagiarism to the student, and the student acknowledges the seriousness of such an offence.
5. The supervisor certifies that the project as described above has sufficient scope to achieve, in principle, the required GAs.
6. It is the responsibility of the student to initiate a discussion with the supervisor on GA achievement prior to filling out and handing in this form.

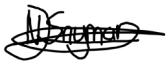
Signatures for agreement on main details and mutual responsibilities

Role	Signature	Date
Student		08/08/2022
Supervisor		

Student's graduate attribute (GA) achievement plan

How will GA 1 **(problem solving)** be achieved? *(<=100 words)*
For many health related reasons it is important for runners to know their foot strike patterns. this becomes important when buying running shoes and preventing or analysis running injuries. This is why a device that could keep track of an user's foot strike patterns would be useful. The data can be displayed in a useful manner in which users can for example, decide what type of running shoe they would need. Doctors can also use the foot strike patterns to prevent or to diagnose running injuries.
How will GA 2 **(application of scientific and engineering knowledge)** be achieved? *(<=100 words)*
By getting the needed data to build an application that can keep track of an user's foot strike patterns and display this data in a useful manner.
How will GA 3 **(engineering design)** be achieved? *(<=100 words)*
An Arduino based device will be used to get ADC readings from a set of pressure sensing resistors. This data will then be sent via BLE to an android application which will record and display this data in such way that runners or health experts can use this information.
How will GA 4 **(investigations, experiments and data analysis)** be achieved? *(<=100 words)*
Thorough test will be done on the Arduino system to verify the reliability of the system. Multiple tests and analysis will further be done with the Android application to demonstrate whether there are any flaws, inconsistencies or successes.
How will GA 5 **(engineering methods, skills and tools, including IT)** be achieved? *(<=100 words)*
Understanding circuits and how to get ADC readings from an MCU. C++ will be the main programming language for the Arduino system. The Android application will be programmed in java and will also include some libraries for visuals.
How will GA 6 **(professional and technical communication)** be achieved? *(<=100 words)*
The project includes a written report and an oral presentation. These demonstrate competence to communicate effectively, both orally and in writing.
How will GA 8 **(individual work)** be achieved? *(<=100 words)*
The student will take primary responsibility for successful completion of all aspects of the project.
How will GA 9 **(independent learning ability)** be achieved? *(<=100 words)*
For successful completion of the project, the student is required to acquire knowledge independently (from the literature or the internet, for example) and without the context of this required knowledge being fully specified in the project definition.

Signature acknowledging own responsibility to achieve GAs

	Signature	Date
Student		08/08/2022