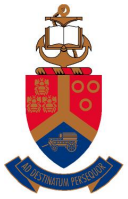

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

COS 790: Hyper-Heuristics and Combinatorial Optimization
Assignment 3: Hybrid Hyper-Heuristic
Due Date: 31 October 2023

This assignment involves implementation of a *hybrid* hyper-heuristic, hybridizing the generation perturbative hyper-heuristic from Assignment 2 and the selection perturbative hyper-heuristic from Assignment 1, to solve the curriculum based course timetabling problem. The data instances for the curriculum based course timetabling problem can be accessed from `https://drive.google.com/drive/folders/16wgeqWnBwcCp-TTtd8e5Af5Us9nb-c8e?usp=drive_link`. The proposed hyper-heuristic should be evaluated on at least *5* of these problem instances.

Assignments must be submitted via clickUP. The source code, compiled code and report must be submitted.

The report must include:

- Description of how the hyper-heuristics are hybridized.
- A description of the experimental setup, i.e. parameter values used for the hyper-heuristic, problem instances used, technical specifications of the machine used to develop the program and run simulations.
- The results (averages and best values over the runs performed) for the hybridized hyper-heuristic and selection perturbative hyper-heuristic from Assignment 1 and the generation perturbative hyper-heuristic from Assignment 2.
- A discussion of the results.

Total: 30