

Module title Evolutionary Algorithms				
Module code YEAL	Level Bachelor (B.Sc.)	Hours per week 4	ECTS credits 5	Duration 1 semester
Module instructor Prof. Dr. Davendra	Lecture type Interactive seminar Individual consultations	Prerequisite(s) Good academic standing	Grading Exam Project Work Individual	
Objectives <ul style="list-style-type: none"> • Upon course completions students will be able: • Understand different evolutionary algorithms • Code and utilize the these algorithms to solve different engineering problems • Understand how to parallelize them using OpenMP and CUDA based architecture. • Understand the application of high performance computing in Engineering applications 				
Content <ul style="list-style-type: none"> • Deterministic algorithms • Evolutionary algorithms • Parallel programming paradigm • OpenMP structure • CUDA application 				
Textbook/teaching material <ul style="list-style-type: none"> • Script • Chapman, B., Jost, G. and van der Pass, R (2007). Using OpenMP: Portable Shared Memory Parallel Programming. The MIT Press. ISBN: 978-0262533027 • Pacheco P (2011). An Introduction to Parallel Programming. Morgan Kaufmann. ISBN: 978-0123742605 • Sanders J and Kandrot E (2010). CUDA by Example: An Introduction to General-Purpose GPU Programming. Addison-Wesley Professional. ISBN: 978-0131387683 				

Note: this is not the official course descriptor according to the “Studien- und Prüfungsordnung” (SPO)