

The version you're consulting is not final. This course description may change. The final version will be published on 1st June.

5.00 credits

30.0 h + 30.0 h

Q2



This learning unit is not open to incoming exchange students!

Language :	French
Place of the course	Charleroi
Prerequisites	<i>The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.</i>
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>Given the learning outcomes of the "Bachelor in Computer science" program, this course contributes to the development, acquisition and evaluation of the following learning outcomes:</p> <ul style="list-style-type: none"> A.A. • S1.G1, S1.3 S1.G1, • S2.2, S2.4 S1.3 • S6.1 <p>-</p> <p>A.A. Students who have successfully completed this course will be able to:</p> <ul style="list-style-type: none"> S2.2, • model a simple problem using the proper mathematical notation, S2.4 • identify classical numerical methods suitable for solving a simple problem expressed mathematically, - A.A • choose, on the basis of precise criteria, the most effective method for numerically solving such a problem, S6.1 • implement a numerical resolution of this simple problem, • explain the problems related to the numerical resolution of equations and their impacts: rounding errors, convergence, stopping criteria.
Evaluation methods	The examination will be a written, on-site test with open-ended questions. It will cover all the material from the lectures and practical sessions. The examination grade will contribute 90% to the final evaluation, while the remaining 10% will come from continuous work and attendance during the practical sessions. The grade for continuous work and attendance is retained throughout the academic year and will not be re-evaluated during the second exam session.
Teaching methods	By presentation of the concept and by implementation.
Content	The philosophy of the course is to introduce numerical methods by describing and, above all, implementing concepts from algebra and mathematical analysis courses. The aim is to develop algorithms while observing the limits of implementing a mathematical concept: data representation (numbers, etc.) and error handling (calculation, stability, propagation, etc.).
Inline resources	https://moodle.uclouvain.be/course/view.php?id=5751
Faculty or entity in charge	SINC

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Computer Science	SINC1BA	5	LSINC1101 AND LSINC1111 AND LSINC1112	