

CPSC-5506EL-01 Computational Science, 2023W (ver. 0115) – draft 0 (subject to change)

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Teaching Assistant: Owen Xue (sxue@ laurentian.ca)

Time: Friday 4pm-7pm (with a break between)

Consultations: by confirmed email appointments on Tuesday (after 1pm) and Fridays (after 7pm)

Source: Journal articles downloaded Web of Knowledge (paid service by our Univ.) and online material.

Major topics:

1. What is Computational Science
2. Heuristics in judgment and decision making
3. Algorithm and heuristic specification methods
3. Monte Carlo method
4. Knowledge management
5. Expert systems
6. Pairwise comparisons
7. Predictions
8. Computational Engineering
9. Software maintenance
10. Applications of differential equations
11. Applications operation research
12. Problem solving strategies

Evaluation:

- ☐ Class participation bonuses by short questions (unannounced) and mini-projects (by invitation only) (20%),
- ☐ Midterm exam 30%,
- ☐ Final exam (50%).

Important: class participation bonuses will not be announced. Questions will be always related to the material covered by the current lecture. Books or any silicon devices are strictly prohibited during test. Plagiarism rules will be imposed so everything copied from the Internet needs to be properly referenced.