

AM4615F : Introduction to Applied Computer Algebra 2014–15 Course Outline

Prerequisite Requirements

Unless you have either the prerequisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites. The prerequisite for this class is AM2413,2415, or 2414F/G or the former 2813B

Accessibility

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 ext. 82147 if you have questions regarding accommodation.

Support Services

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Mental Health@Western (http://www.health.uwo.ca/mental_health) for a complete list of options about how to obtain help.

Additional student-run support services are offered by the USC, <http://westernusc.ca/services>.

The website for Registrarial Services is <http://www.registrar.uwo.ca>.

Course Website

Students should check : <http://perso.ens-lyon.fr/gilles.villard/sccourse/index.htm> on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class. The missing of critical information due to your failure to check the website cannot be used as a basis for appeal.

Course Materials

There is no required text for this course

Course Objectives

Computer Algebra or Symbolic Computation aims at using computers for representing and manipulating exact mathematical objects, and designing and implementing exact efficient algorithms for solving scientific problems. This course studies the interplay between efficient algorithms, algebra and computation, and surveys several key topics, issues, and algorithmic principles of the domain. A special focus is put on polynomial and matrix aspects, and on lattice basis reduction.

Marking Scheme:

Component	Fraction of Course Grade
Reading Project	10%
Assignments	40%
Final Project	50%

Lecturer and Instructor Information

Lecturer: Gilles Villard, Room 404, Fields Institute, gilles.villard@ens-lyon.fr
Western Coordinator, Rob Corless, MC272, rcorless@uwo.ca, 519 661 2111 x 8785