

COMPSCI 3331 – Course Syllabus

Foundations of Computer Science 1

Fall 2022 Term

Calendar Description: Languages as sets of strings over an alphabet; operations on languages; finite automata, regular expressions; language hierarchy; Turing machines; models of computation

Course Topics:

- Formal Languages
- Deterministic and Nondeterministic Finite Automata
- Regular Expressions
- Non-regular languages and closure properties
- Context Free languages
- Non-context free languages and closure properties
- Turing Machines
- Computability

Lecture Schedule:

- Tuesday, 3:30-5:30 - SSC 2050
- Wednesday, 1:30-2:30 – Middlesex College 110

Prerequisites:

- COMPSCI 2214 OR MATH 2155

Instructor

Mike Domaratzki

- Email: mdomarat@uwo.ca
- Office: Middlesex College 355E
- Tel: 519 661 2111 x 82561

Notes on contacting me:

- Phone calls are not recommended, as I'm often not available in my office.
- Use your Western email address to contact me.
- Any **general questions about the course** should be asked on the owl forum.
- Emails and forum posts will be responded to as soon as possible. In general, responses are not guaranteed on the weekend or in the evening.

Office Hours

- All office hours are in-person in Middlesex College 355E.
- Mondays, 2:30-3:30 PM
- Thursday 2:30-4:30 PM
- Office hours may need to be cancelled on short notice. In this case, information will be posted on owl as soon as possible.

Contingency Planning.

In the event of public health or other issues during the course that necessitates the course not be delivered face-to-face, all course content will be delivered online, either synchronously or asynchronously. The grading scheme will **not** change. Any remaining assessments will be conducted online as determined by the course instructor.

In the event of a test, quiz or final exam being online, the exam will use a remote proctoring service (such as Proctor Track). By continuing in this course, you consent to the user of this software, and acknowledge that you will be required to provide personal information (including some biometric data) and that the session may be record. Completion of the course will require you to have a reliable internet connection and a device that meets the technical requirements of the service. More information about remote proctoring can be found at remoteproctoring.uwo.ca.

Course Materials

Course materials will be available on the course owl site, including notes and videos. In this course, you will be expected to watch videos before attending class. A schedule is available on the owl site. It is your responsibility to keep up with course materials.

If students need assistance with the course OWL site, they can seek support on the OWL Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

There is **no required textbook** for the course. Potential textbooks for those who would like one:

- Rich, Automata, Computability and Complexity. ([free PDF available on the author's website](#)).
- Sipser, Introduction to the Theory of Computation.
- Martin, Introduction to Languages and the Theory of Computation.
- Hopcroft, Motwani and Ullman, Introduction to Automata Theory, Languages and Computation.

Differences in notation may exist between different textbooks and what we use in class.

Course Evaluation

- Assignments (4) - 32%
- In-class quizzes (6) – 12%
- Midterm (in class, Tuesday October 25) – 20%

- Final Exam (TBA during exam period) – 35%

Assignments

The course will use gradescope for submitting assignments. Instructions will be posted on the course website. It is your responsibility to read and follow the instructions. Failure to submit the assignment according to the instructions may result in losing some or all of the assignment grades.

Requests for marking reconsideration must be made through gradescope before the deadline given. Requests made in other formats (e.g., by email) or beyond the deadline will not be considered.

Assignment Due Dates

Assignment	Due Date
Assignment 1	October 11
Assignment 2	October 26
Assignment 3	November 22
Assignment 4	December 7

- The exact time of the assignments will be given in the assignment specification.
- The late penalty for assignments is 1% per hour (or part of an hour) up to a maximum of 48 hours, after which no assignments will be accepted.

Assignment Extensions

- If a student has a **serious medical or compassionate grounds for extension**, they should speak to an Academic Counsellor in their home faculty. The Counsellors will contact me individually.
- Beyond the above consideration and the policy for late assignments, students in the course can use **ONE** individual extension for an assignment, no questions asked.
- This individual extension is for 3 days (72 hours).
- To use the individual extension, students **must** submit the **form on owl**.
- The individual extension can only be used once. Further requests for extensions will not be considered. Any attempt to use an additional individual extension without permission will result in an assignment not being accepted.
- An individual extension and the late penalty **CANNOT** be used together. If an extension is used, the due date and time is strict. No late assignments will be accepted beyond the extended deadline.

Quizzes

There are 8 quizzes in the course.

- Each quiz will be given on a Wednesday, and will cover all material since the last quiz.

- Each quiz will be given for the first 15 minutes of class. Class will continue after the quiz is ended.
- Quizzes are done in class. Quizzes are to be done individually. They are open-book.
- Quizzes are worth 12% of your final grade. Each quiz is worth 2% of your final grade, and the **top six** quiz marks will be used to calculate your grade.
- If you complete 5 or fewer quizzes, you will be given marks of 0 for the remaining quizzes. There are **no** make-up quizzes. If you have a medical or other documented reason for missing quizzes (resulting in less than 6 quizzes written), missed quiz marks will be allocated to your other quiz marks.

Quiz Dates

Quiz	Date
Quiz 1	September 28
Quiz 2	October 5
Quiz 3	October 12
Quiz 4	October 19
Quiz 5	November 9
Quiz 6	November 16
Quiz 7	November 23
Quiz 8	November 30

Midterm and Final Exam

- The midterm and final exams are both closed book.
- The midterm and final exams will both contain multiple question types, including possibly True/False, Multiple-Choice and written questions.
- The midterm exam is on Tuesday, October 25 in class.
- There is no make-up midterm exam. If you are absent from the midterm, you must present documentation to your home faculty. There will be no makeup midterm exam, except for students requesting a special midterm exam for University recognized reasons. These students must have notified the course instructor and filed documentation with their Dean's Office at least 2 weeks prior to the midterm exam. If there are other serious medical or compassionate grounds for missing the midterm exam, please take supporting documentation to the office of the Dean of your faculty, who will contact the instructor. In such cases, the weight of your midterm exam will be shifted to the final exam. For further information, please consult the University's medical illness policy at

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf

The Student Medical Certificate is available at

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

- The final exam is scheduled by the Office of the Registrar during the final exam period. Students are advised not to make travel plans until they have consulted the final exam schedule.
- The final exam will be cumulative.
- Computer-marked multiple-choice exams may be screened for similarity by software that checks for unusual coincidences in answer patterns that may indicate cheating.

Religious Accommodations

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at: <https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>

Absences from Final Examinations

If you miss the Final Exam, please contact the Academic Counselling office of your Faculty of Registration as soon as you can. They will assess your eligibility to write the Special Examination (the name given by the University to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (e.g., more than 2 exams in 23-hour period, more than 3 exams in a 47-hour period, see https://www.registrar.uwo.ca/examinations/exam_schedule.html).

If a student fails to write a scheduled Special Examination, the date of the next Special Examination (if granted) normally will be the scheduled date for the final exam the next time this course is offered. The maximum course load for that term will be reduced by the credit of the course(s) for which the final examination has been deferred. See the Academic Calendar for details (under Special Examinations).

Academic Policies

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

In accordance with policy,

https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf

the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at their official university address is attended to in a timely manner.

Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: <https://www.uwo.ca/sci/counselling/>

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

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

https://www.uwo.ca/health/student_support/survivor_support/get-help.html

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

Please contact Mike Domaratzki if you require course material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at

http://academicsupport.uwo.ca/accessible_education/index.html

if you have any questions regarding accommodations.

Learning-skills counsellors at the Student Development Centre (<https://learning.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.

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

Accommodation Policies

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf

Scholastic offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf