University of Western Ontario
Department of Mathematics
Mathematics 2124A
Introduction to Mathematical Problems
September-December 2019

INSTRUCTOR: Rasul Shafikov, shafikov@uwo.ca, MC 112. Emails will be answered within 24 hours. Office Hours: TBA.

COORDINATES: Tuesdays: 12.30 – 2.20 PM; Thursdays: 1.30 – 2.20 PM. Room: AHB-1B06.

COURSE WEB PAGE: http://shafikov.ca/rasul/teaching/fall2019/2124/

TEXTBOOK: *The Art and Craft of Problem Solving, Third Edition*, by Paul Zeitz, published by Wiley.

PREREQUISITES: Calculus 1501A/B or Applied Mathematics 1413, with a minimum mark of 60%, or Calculus 1301A/B with a minimum mark of 85% or permission of the instructor.

COURSE OUTLINE: Primarily for Mathematics students, but will interest other students with ability in and curiosity about mathematics in the modern world as well as in the past. Stresses development of students' abilities to solve problems and construct proofs. Topics will be selected from: counting, recurrence, induction; number theory; graph theory; parity, symmetry; geometry.

EXAMS: There will be two in class midterms: **October 8** and **November 12**. Please mark these dates in your calendar. The final exam will be scheduled by the Registrar office.

IMPORTANT NOTE: This course differs from other mathematics courses in that it is not based on a specific body of knowledge but, instead, focusses on the processes involved in solving problems which incorporate mathematical constructions. Consequently, active participation of each student is necessary to make the course interesting and rewarding.

WHAT IS EXPECTED OF THE STUDENT: Students are expected to attend all lectures and complete all tests, assignments, and examinations. No aids are permitted in tests and examinations. Regular homework is an essential part of the course; it is the student's responsibility to keep up with the assigned homework and to seek additional help if and when it is needed.

EVALUATION OF STUDENT PERFORMANCE: Midterms & Assignments - 60%; Final Examination - 40%. No calculators or other electronic devices or any other aids are allowed on tests and exams.

SENATE POLICY ON PREREQUISITES: Unless you have either the requisites 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.

STATEMENT ON ACADEMIC OFFENCES: Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence. Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

ABSENCE OR MISSED WORK: If you are unable to meet a course requirement due to illness consult the Policy on Accommodation for Medical Illness - Undergraduate. If you are unable to meet a course requirement due to other serious circumstances, contact your instructor immediately.

SUPPORT SERVICES: Registrars: Main Campus, Brescia, Huron, King's; Student Development Centre; University Students' Council; Academic Calendar; Information Technology Services (ITS). Students who are in emotional/mental distress should refer to Mental Health Western for a complete list of options about how to obtain help.

ADDITIONAL COURSE POLICIES: Please consult the following page for additional information https://www.math.uwo.ca/undergraduate/2019-20_math_common_course_policies.html