Columbia College
Foundation Mathematics for Professionals (MAT0101)

Lecture 1

Course Outline

Semester Dates: January 02, 2023 – Saturday February 04, 2023

Facilitator: Shahin Ghomeshi
Email: Shahin.Ghomeshi@columbia.ca

Class Time: 5:30 PM - 9:30 PM (Mon./Wed.)
Room: Online class (MS Teams)
Credit: Non-Credit Course
Prerequisite: Math 99

Note: It is the student's responsibility to be familiar with the information contained in the Course Outline and to clarify any areas of concern with the facilitator. If a holiday falls on a scheduled class day or a class needs to be rescheduled, a make-up class will be scheduled for Friday. Students are required to make arrangements to be present at the rescheduled class.

Course Description:

This course is for students who intend to enter a professional program and may require a refresher in key mathematical concepts applicable to their education and professional goals. It will provide students with a multidimensional, contextual learning experience for the acquisition of pre-requisite content and skills in mathematics including concepts, terms, expressions, applications, equations, and problem-solving. The course will cover basic math skills, fractions, decimals, percentages, ratio and proportion, basic algebra, equations, metric system, and problem solving. (5 weeks, 40 hrs.)

Classes are held online. Students will need access to a computer or quality tablet (iPad, etc.) and reliable internet connection during the scheduled class times; a laptop or regular computer works best. A microphone and camera are also required. Students will be provided with instructions and login information for Microsoft Teams (online classroom) a few days before classes begin.

The final exam will be held on-campus depending on COVID-19 policies at that time. Columbia College is committed to following Alberta Health protocols for pandemic safety.

Learning Outcomes:

As a result of active participation in these sessions, a student can expect to demonstrate a high level of understanding and accuracy in the following areas:

- Whole Numbers
- Fractions
- Decimal Numbers
- Percentages, Ratios, and Proportions
- Positive and Negative Numbers & Order of Operations
- Equations
- The Metric System

Course Format:

This course uses a variety of teaching/learning methods including discussion, personal reflection, experiential exercises, student presentations, role-plays, group activities and especially case studies. Our faculty aims to create a learning environment where the learner is actively engaged in inquiry, critical thinking and problem solving. The classroom provides you with a place where you can learn with and from others in a cooperative and collaborative manner.

Learners are expected to take a very active part in class discussions and take responsibility for their own learning. Be a positive and co-operative team member. Columbia College uses a facilitation model of instruction where the facilitator's role is to facilitate learning. The expectation is that students will come to class prepared with pre-class homework completed. The facilitator will engage learners in activities that are based on their completed homework and readings. An enthusiastic and positive approach in the classroom will create an atmosphere that will help every student develop the knowledge, skills and attitudes that are needed for success.

How students conduct themselves in our classes will, to a large extent, mirror their conduct in society and at a future work site. For example, if they tend to ask questions, challenge the ideas of others in a respectful manner, draw out the best from their colleagues, and encourage both group development and task accomplishment in this class, it is likely they will do the same at work. A high level of student involvement and developing professionalism is expected in the classroom as learners work towards their goals.

Required Textbooks and Equipment:

Columbia College Math 101 Workbook
Raines, V. (2010). *Basic Math Review for Nurses.* Philadelphia: F.A. Davis Company

Please call the Main Office (403-235-9300) to make arrangements for payment and textbook pick up.

Homework Assignment Due for the First Class:

The completion of the Math 99 workbook and final test should be completed before starting this course. Learners are required to master all of the basic math skills that the course covers. Expertise in the timetables is mandatory.

Watch https://mathantics.com/lesson/intro-to-mixed-numbers

Read pages 34-39 in the Raines Textbook. Be prepared for a quiz on this homework.

Prepare 3 questions that have arisen from the reading that you would like to have answered. These questions will be submitted to the facilitator on the first day of the course.

Please note: Columbia College follows a facilitator model that requires everyone to participate in the class and have the re-readings/homework completed. Please ensure that you know as much as possible before the class begins because there is not time to read the textbook in class or review all of the materials before writing a quiz.

Evaluation - Assessment of Student Performance:

The final grade in the course will be based on the following elements. Wherever possible, facilitators will use rubrics to assess student performance and offer feedback.

Title of Assignment/Examination	Due Date	Weight
Major Assignment	Class 6	10%
Daily tests	Daily	40%
Final Exam (no calculators are allowed)	Class 10	50%

Please note that all homework and assignments are due at the beginning of each class.

Major Assignment: The facilitator will provide you with this in Class 6. It will include questions from all the content in Math 99 and Classes 1-5.

Grading:

Grades for each component will be added together at the end of the semester. The final total will be translated to the Columbia College's 4.0 grading scale as follows:

Marking and Grading Conversion:

Description	*Letter Grade*	*Grade Points*	*Percentage Scale*	
Excellent	A+	4.0	100	95
	A	4.0	94	90
	A-	3.7	89	85
Good	B+	3.3	84	80
	B	3.0	79	75
	B-	2.7	74	70
Satisfactory	C+	2.3	69	65
	C	2.0	64	60
	C-	1.7	59	55
Poor	D	1.0	54	50
Failure	F	0.0	49	0

Please note that the passing grade is "C+" in this course. You must also achieve a mark of at least 65% on the final exam

Submission and Completion of Assignments:

You are expected to submit assignments by the due date. Any late assignments may be assessed with a marking penalty of 5% per day. If you are unable to submit an assignment on the due date, you must request an extension **before** the due date by filling out an *Application for Assignment Extension form (SSPP-F012)* that is to be submitted to the Department Chair for approval. This form is available on Columbia's website, Bldg. 802 – Main Office and from Department Chairs.

Requesting an Examination Deferral:

If you are requesting an exam to be deferred, you must submit an Application for *Deferred Examinations form (SSPP-F012)* to the Department Chair **within 48 hours of the missed examination date and time**. Applications for deferred examinations will only be considered due to medical or personal emergency. A medical certificate or other appropriate documentation may be required. This form is available on Columbia's website, Bldg. 802-Main Office and from Department Chairs.

Attendance Requirements:

Columbia College believes that students are committed to their program and learning experiences. However, it is understood that there are times when students may be absent. Any absences can be viewed as a potentially serious disruption of the learning process and necessary achievement of the learning objectives. Being late is also considered unacceptable as it interferes with the learning opportunities of others. Unavoidable absences or lateness must be reported to the course facilitator in advance. Please refer to Columbia College's *Attendance Policy and Regulations (ADM-P151)* for detailed information on Attendance Requirements.

Academic Integrity:

Academic dishonesty is a serious offence and can result in suspension or expulsion from Columbia College.

There is no tolerance for academic dishonesty and any student caught plagiarizing is subject to serious sanctions as outlined in the *Student Code of Conduct Policy (ADM-P229)*. Students are encouraged to familiarize themselves with this policy and avoid any behavior that could possibly be seen as cheating, plagiarizing, misrepresenting, or putting into question the integrity of one's academic work.

Student Conduct:

It is the responsibility of each student to uphold the expectations and responsibilities outlined in the *Student Code of Conduct Policy (ADM-P229)* and any additional requirements established by your program.

Generally, each student will:

- be respectful and courteous toward others;
- demonstrate appropriate and supportive communication skills, and coach, assist, advise and otherwise support other students in their studies;
- manage any personal stress and conflict in a positive and resourceful manner, and assist others to do the same;
- be dressed in a manner appropriate for their workplace or learning environment, as established by the program;
- conduct themselves in a professional manner with regard to their communication with others and their behavior in class;
- conduct themselves with academic integrity in all of their learning activities, tests, exams, and assignments
- keep up with day-to-day classroom and course expectations.

Important Dates:

Description	***Date***
Last to add/drop courses	5 school operating days from the start of the semester OR before the third scheduled class, whichever is greater
Last day to withdraw without academic penalty	50% or less of the semester has been completed
Final Examination	A final exam may take many formats. If a final exam is scheduled, it will be taken in an assigned room under the supervision of a Test Proctor. Students must be on time as they will not be permitted to enter once the exam has started. Exam schedules are available in each building on a bulletin board, as well as online at www.columbia.ab.ca/exams. It is the student's responsibility to check this exam posting.

Appeals:

Please refer to the *Student Appeal Policy (ADM-P177)*.

Students with Temporary or Permanent Disabilities:

Students with temporary or permanent disabilities or medical conditions may apply for accommodations. To be considered for an accommodation, a student must register with Columbia College's Accessibility Services by making an appointment with a Accessibility Services Advisor – Main Office – Bldg. 802 or emailing accessibilityservices@columbia.ab.ca. The Department Chair or facilitator is not able to provide you with any accommodation without you taking this step. Please refer to Columbia College's website to review *the Accommodation Policy and Handbook (ADM-P188)*.

Student Support:

Students should be aware that Life Coaching, Career and Disability Services, and Student Support Services (i.e., tutoring, academic strategists, etc.) are provided by Columbia College. Inquire how to request these services at the Main Office in building 802. It is the student's responsibility to discuss their specific learning needs with the appropriate service provider.

Class Schedule/Overview:

Please note that this schedule is subject to change. Any changes or cancellations will be emailed to you. It is your responsibility to check the email address you have given to the school AND your Columbia email on a daily basis for any messages from the Department Chair/designate, facilitator or College Administration. It is the student's responsibility to be familiar with the information contained in the Course Outline and to clarify any areas of concern with the facilitator. Additional homework may be assigned in class.

MA refers to MathAntics (https://mathantics.com/). Please watch the videos and ensure you understand them; they relate to the content in the Raines Textbook readings. You should complete all the questions you can in the Raines textbook to prepare for class.

Class Session	Topics	Pre-Class Readings/Homework
1	• Quiz 1A: Math 99 and Basic Mixed Numbers • Review of Problems from Math 99 • Mixed Numbers • Decimals: Multiply and Divide by Exponents • Quiz 1B: Mixed Numbers, Exponents, decimals	• Math 99 • Multiplication Speed Review • MA: Introduction to Mixed Numbers • Raines pages 34-39
2	• Quiz 2A: Rates, Ratios and Proportions • Ratios and Proportions • Cross Multiplication • Ratio and Proportion Problems • Percent Problems • Rate Problems • Quiz 2B: Rates, Ratios, Proportions, Percents • Introduction to Negative Numbers	• MA: Ratios and Rates • MA: Proportions • Raines Chapter 4 (87-114)
3	• Quiz 3A: Adding and Subtracting Integers • Multiplying and Dividing Integers • Order of Operations with Integers • Exponents & Exponents with Integers • Quiz 3B- All Integers • Intro to Algebra- Substitution	• Raines: Chapter Quiz 4.6 (pag113-114) as review • MA: Negative Numbers • MA: Adding and Subtracting Integers • Raines pages 115-123
4	• Quiz 4A (Distributive Property, Collecting Like Terms, Substitution and One-Step Equations) • Two-Step Equations • Distributive Property in Algebra • Collecting Like Terms in Algebra • Quiz 4B - All Algebra	• Raines: Pages 124-136 (Review) • MA: Solving Basic Equations Pt 1 • MA: Solving Basic Equations Pt 2 • Raines: Pages 137-147
5	• Quiz 5A: Algebra and Basic Word Problems • Word Problems using Algebra, Ratios, etc. • Quiz 5B (Word Problems)	• Raines: 148-166 • https://www.youtube.com/watch?v=WQYzOpcnWxs • https://www.purplemath.com/modules/translat.htm Only the 2 pages are required; you do not need to follow the links at the end of page 2
6	• Major Assignment: In Class • Introduction to the Imperial System	• Review in Preparation for Major Assignment
7	• Quiz 7A • The Imperial System • Converting Units • Word Problems with Imperial Units • Quiz 7B	• Raines Chapter 7 (pages 175-190)

Class Session	Topics	Pre-Class Readings/Homework
	• Intro to Conversions the Metric System	
8	• Quiz 8A (Metric system) • Converting in the Metric System • Converting Imperial to Metric and vice versa • Quiz 8B (All Conversions)	• Raines Chapter 8
9	• Review for Exam	• Raines: All Chapter Tests in Chapters 1-8; bring questions that caused you difficulty to class.
10	• Onsite final Exam	• Review for Exam