

**Columbia College**  
**Foundation Mathematics for Professionals (MAT0101)**

**Lecture 1**

**Course Outline**

Semester Dates: August 03 – September 05, 2026

Facilitator: Shahin Ghomeshi

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Class Time: 5:30 PM - 9:30 PM (Tues/Thurs.)

Room: Online class (MS Teams)

Credit: Non-Credit Course

Prerequisite: None

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.

When 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 attend 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, ratios and proportions, basic algebra, equations, the metric system, and problem solving. (5 weeks, 40 hrs.)

Classes are held online. Students will need access to a computer, a microphone, a camera, and a reliable internet connection during the scheduled class times. Instructions and login information for Microsoft Teams (online classroom) and Moodle will be provided to new students before classes begin.

**The final exam will be held on campus.** Students living within a 130 km radius of Calgary are expected to attend in person. Students living more than 130 km from Calgary should notify the Principal of Academic Upgrading to make alternative arrangements. More information, including the exam time, will be provided on the first night of class.

**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 and Customary Measurement Systems

## Course Format:

This course uses a variety of teaching/learning methods, including discussion, personal reflection, experiential exercises, student presentations, role-plays, and group activities. 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.

You are expected to take a very active part in class discussions and take responsibility for your own learning. Be a positive and cooperative team member. Columbia College uses a facilitation model of instruction where the facilitator's role is to facilitate your learning. The expectation is that you will come to class prepared with pre-class homework completed. Your facilitator will engage you in activities that are based on your completed homework and readings. Your 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 you conduct yourself in our classes will largely mirror your conduct in society and your future work site. For example, if you tend to ask questions, challenge the ideas of others in a respectful manner, draw out the best from your colleagues, and encourage both group development and task accomplishment in this class, you will likely do the same at work. A high level of student involvement and developing professionalism is expected in the classroom as you work towards your goal.

## Required Textbooks and Equipment:

Columbia College Math 101 Workbook

Raines, V. (2010). *Basic Math Review for Nurses*. Philadelphia, 2<sup>nd</sup> Edition: 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:

**BEFORE** your first class, complete the Math 99 Booklet up to the end of Appendix 3. You need to know fractions and decimals, as well as adding, subtracting, multiplying, and dividing like an expert, before Math 101 begins. You should be able to get nearly 100% on the Practice test before Appendix 1.

Please note: You will not be reading the text in class. Columbia College follows a facilitation model that requires everyone to participate in the class. Please ensure that you know as much as possible before the class begins, because there is no time to go over everything 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 |
|------------------------------------|----------|--------|
| Quizzes (Pre-class and post-class) | Daily    | 35%    |
| Assignment                         | Class 6  | 15%    |
| Final Exam                         | Class 10 | 50%    |

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

## Grading:

Grades for each component will be added together at the end of the semester. The final total will be translated to 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  |

**Learners wanting to enter the Dental Assisting and Nursing Programs must achieve a minimum of 75% on the final exam as well as receive a final mark of over 75% to pass this course. Students entering the non-Diploma Programs will need 70% on the exam and 70% as a final grade to enter their programs.**

## Submission and Completion of Assignments:

You are expected to **submit assignments by the due date**. 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. Any late assignments may be assessed with a marking penalty of 5% per day.

## 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 a 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 the 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 violation that may lead to suspension or expulsion from Columbia College. Students are responsible for understanding both the [Student Code of Conduct \(ADM-P229\)](#) and the [AI Use Policy for Students \(ADM-P457\)](#). Ignorance of these policies is not an acceptable excuse.

### 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;
- professionally conduct themselves concerning their communication with others and their behaviour 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:

| <b>Description</b>                            | <b>Date</b>                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Last to add/drop courses                      | 5 school operating days from the start of the semester<br>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. <u>Students must be on time, as they will not be permitted to enter once the exam has started.</u> Exam schedules are available in each building on a bulletin board, as well |

as online at [www.columbia.ab.ca/exams](http://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 an Accessibility Services Advisor – Main Office – Bldg. 802 or emailing [accessibilityservices@columbia.ab.ca](mailto:accessibilityservices@columbia.ab.ca). The Department Chair or facilitator is not able to provide you with any accommodations 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 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.

| Class Session | Topics                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Pre-Class Readings                                                                                                                                                                                                                                                                                                                                       |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1             | <ul style="list-style-type: none"> <li>Mixed numbers               <ul style="list-style-type: none"> <li>Some review of fractions</li> <li>Pictorial representation of a mixed number</li> <li>Changing mixed to improper form and vice versa</li> <li>Performing operations with mixed numbers (adding, subtracting, multiplication and dividing)</li> </ul> </li> <li>Exponents, in particular powers of 10.</li> <li>Operations with decimal numbers</li> </ul> | <ul style="list-style-type: none"> <li>Math 99 Booklet</li> <li>This includes Raines Chapters 1-3</li> </ul>                                                                                                                                                                                                                                             |
| 2             | <ul style="list-style-type: none"> <li>Ratios and Proportions               <ul style="list-style-type: none"> <li>Calculating the missing value in proportion.</li> </ul> </li> <li>Percentages (problems)</li> <li>Rates               <ul style="list-style-type: none"> <li>solving word problems</li> </ul> </li> </ul>                                                                                                                                        | <ul style="list-style-type: none"> <li>Raines Chapter 4 (pages 87-114)</li> <li>MathAntics: <a href="#">Ratios-and-Rates</a></li> <li>MathAntics: <a href="#">Proportions</a></li> <li>MathAntics: <a href="#">Finding a Percent</a></li> <li>MathAntics: <a href="#">What Percent Is It</a></li> <li>Homework as assigned by the facilitator</li> </ul> |
| 3             | <ul style="list-style-type: none"> <li>Operations with positive and negative numbers</li> <li>Order of operations with integers</li> <li>Exponents where the exponents can be positive or negative integers.</li> </ul>                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>Raines Chapter 5 (pages 115-123)</li> <li>MathAntics: <a href="#">Order of Operations</a></li> <li>MathAntics: <a href="#">Negative Numbers</a></li> <li>MathAntics: <a href="#">Add &amp; Subtract Integers</a></li> </ul>                                                                                       |
| 4             | Solving linear equations                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>Raines pages 124-126 (Review)</li> <li>Raines pages 137-147</li> <li>MathAntics: <a href="#">Solving Basic Eq'ns1</a></li> <li>Homework as assigned by the facilitator</li> </ul>                                                                                                                                 |
| 5             | Algebra Word Problems                                                                                                                                                                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>Raines pages 148-166</li> <li><a href="#">Sample Questions Video 1</a></li> <li><a href="#">Sample Questions Video 2</a></li> <li>Homework as assigned by the facilitator</li> <li>In-class assignment</li> </ul>                                                                                                 |
| 6             | <ul style="list-style-type: none"> <li>Review and Major Assignment</li> <li>Intro to Customary Units</li> </ul>                                                                                                                                                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>Raines: Everything to the end of Class 5</li> <li>Videos used in Classes 1-5</li> <li>Homework as assigned by the facilitator</li> </ul>                                                                                                                                                                          |
| 7             | <ul style="list-style-type: none"> <li>Customary Units               <ul style="list-style-type: none"> <li>word problems and applications</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>Raines pages 175-190</li> <li>Homework as assigned by the facilitator</li> </ul>                                                                                                                                                                                                                                  |
| 8             | <ul style="list-style-type: none"> <li>SI (Metric System) Conversions</li> <li>Converting between Metric and Customary</li> </ul>                                                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>Raines Chapter 8</li> <li>Homework as assigned by the facilitator</li> </ul>                                                                                                                                                                                                                                      |
| 9             | Course Review                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>Prepare questions that need clarifying</li> <li>Raines: All</li> <li>Videos: All</li> <li>Homework as assigned by the facilitator</li> <li>Tips on doing math exams</li> </ul>                                                                                                                                    |
| 10            | <b>3-hour In-Person Final Exam – location to be announced</b>                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                          |