

Columbia College
Introduction to Mathematics for Professionals

Lecture 1

Course Outline

Semester Dates: August 07 – August 17, 2026

Facilitator: Shahin Ghomeshi

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Class Time: 5:30 PM - 8:30 PM MST

Room: Online class (MS Teams)

Class #1: ~~Monday, August 03~~, Friday Aug 07

Class #2: Monday, August 10

Class #3: Monday, August 17,
Plus, an onsite exam

Credit: Non-Credit Course

Prerequisite: None

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 designed to prepare students for the mental math required for more advanced math classes. This course lays the foundations necessary to learn the techniques necessary to pass a foundational skills course that includes equations, ratios, rates, and word problems. It fills in gaps that many adults have developed since they studied basic math many years ago, and prepares them to master the more complex mental math skills required in many professions, particularly in the PN program. (3 weeks, 9 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:

- Multiply basic numbers (times tables) without a calculator
- Complete basic arithmetic questions at high speed without a calculator
- Achieve mastery of basic fractions and decimal math without a calculator
- Feel confident that they can complete the math required later in their programs.

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's online Math 99 booklet
- Columbia's Math 99 Workbook (free until January 2025)
- Mathantics.com (optional payment provides a higher-quality experience)
- Other websites as outlined in syllabus or required by facilitator (free).

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

Homework Assignment Due for the First Class:

BEFORE your first class, WATCH THE INTRO VIDEO <https://youtu.be/BNViAbDp-Zs> to help reduce confusion.

The following assignment is to be completed **BEFORE** your first class. It will take you between 90 minutes and 10 hours]

1. Complete the times tables memorization section of the workbook (pages 1-21). None of the pages between M6 and M20 should take more than 90 seconds at the very most.
2. Practice the 2-10 times tables at <https://www.mathmammoth.com/practice/multiplication>. See the Instructions at the end of this syllabus for setting up the practice properly. You should be able to complete an absolute minimum of 20 questions in 1 minute. Being fast on the computer is as important as being fast on paper in the workbook.
3. Watch the [Mathantics.com](https://www.mathantics.com) videos in the section titled "Algorithms – Part 1" and "Basic Division" and Long Division" from the next section.
4. Complete pages 22-29 in the workbook. Do as many questions as necessary until it is easy and fast.

2. Watch the Mathantics video titled "[Simplifying Fractions.](#)"
3. Complete the workbook pages 29-31
4. Prepare 3 questions that have arisen from your reading that you would like to have answered. You will be instructed on how to submit these questions to your facilitator on the first day of your course.

Please note: 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.

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 your performance and offer feedback.

Title of Assignment / Examination	Due Date	Weight
Daily Tests	Classes 1 through 3	10%
Final Exam - Location Building 802.	As arranged with the Assessments Department.	90%

To pass this course, you **MUST** complete the final exam with no more than 3 errors in 10 minutes.

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

Please note that the passing grade is "C+" in this course.

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:

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. <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 . <u>It is the student's responsibility to check this exam posting.</u>

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. 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 & Assignments
1	- Times Tables - Addition, subtraction, multiplication and division of four-digit numbers - Divisibility Rules - Equivalent fractions and reducing fractions - Adding and Subtracting Fractions	WATCH INTRO VIDEO for instructions https://youtu.be/BNViAbDp-Zs See page 2 of this syllabus for the correct order to complete the homework. - Pages 1-31 of Workbook - Practice times tables at mathmammoth.com until you can get 25 correct answers in 1 minute (If you have a number pad on your keyboard, it is faster). Instructions are on the last page of this syllabus. - Watch Mathantics: Algorithms-Part 1 (4 videos), Multi-Digit Addition, Multidigit Subtraction, Basic Division, Long Division and Simplifying fractions. - Prepare questions for your facilitator. References to specific pages and questions in the workbook are most efficient.
2	- Pretest on all topics from classes 1 and 2 - Adding and Subtracting fractions with unlike denominators - Multiplying and dividing fractions	- Practice times tables on the MathMammoth website to increase speed and accuracy - Watch Khan Academy: Adding fractions with unlike denominators. Do the practice in the section right after the video. - Watch Khan Academy: Subtracting fractions with unlike denominators introduction - Complete workbook pages 36-39 - Watch Mathantics Multiplying Fractions and https://mathantics.com/lesson/dividing-fractions - Complete workbook pages 40-44
3	- Pretest on all topics from classes 1 and 2 and pre-class homework from class 3 - Pedmas - Adding, subtracting, multiplying and dividing decimals - Converting fractions to decimals and vice versa	- Practice times tables on the MathMammoth website to increase speed and accuracy - Watch Mathantics: Order of Operations - Complete Workbook pages 50-51 - Watch Mathantics Decimal Arithmetic - Complete workbook pages 45-49 - Watch Maths Guy: Converting Improper fractions to mixed numbers - Watch Maths Guy: Converting mixed numbers to Improper fractions - Complete workbook pages 52-53
4	Exam (date to be arranged with the Assessments Department following Class 3)	Review as necessary Complete the review tests (time them!) in the workbook pages 54-63

Appendix 1

Settings for the <https://www.mathmammoth.com/practice/multiplication> website
Your target is 25 or more correct answers in 1 minute.

Choose a list of tables Choose a list of numbers to use

Tables of:

Check All Check Tables 1-12 Uncheck All

☒ 1 ☒ 2 ☒ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9

☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17

☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24

☐ Timed practice (5 sec per answer)

☒ Not timed

Number of questions:

30

OR

☒ Practice for a set time: 1 min

Go!

Set the quiz to cover the numbers you want to practice (one at a time to start, then a small group of times tables like 1 and 2 and 3 or eventually for 1 all the way to 10 (or 12). SET THE LAST OPTION FOR 1 or 2 MINUTES and press “Go”.