



Mathematics 1051

ISTEM – Functions and Trigonometry

Instructor: John Kimball

Lecture Schedule: Tuesdays: 11:30am – 1:00pm and Thursdays: 9:00am – 11:30am, RB2025

Office Hours: RB2005 by appointment.

Email: jfkimbal@lakeheadu.ca

Textbook: Math 1051 YA – 2025/2026, Functions and Trigonometry, Course Guide Notes by John Kimball – Price: \$62.60

Course Webpage: There is a page for the course on MyCourseLink through myInfo. Announcements, Assignments, due dates, the syllabus, and any other course information will be posted here.

Course Content: By the end of the course students will be able to: understand the concept of a function; graph functions using the Cartesian coordinate system; find the domain and range of a variety of functions; successfully compose two functions; define one-to-one and onto functions; compute inverses of functions; solve linear equations and inequalities; write and interpret solutions using interval notation; convert angles between radians and degrees; compute trigonometric ratios and recall special triangles; solve trigonometric equations; and convert between polar and rectangular coordinates.

Course Evaluation:

Category	Weight
Attendance	10%
Test #1	Best 2 20%
Test #2	
Test #3	
Final Exam	30%

Category	Weight
Weekly Assignments	20%
Factoring Assignment	5%
Graphing Assignment	10%
Trigonometry Assignment	5%
Total	100%

Attendance: Students are expected to attend every class and on time. Being late to class is disruptive and disrespectful to the instructor and your peers. Furthermore, coming to every class greatly increases your chances in being successful in this course.

Assignments: Working regularly on the assignments is essential for success in this course. Students are also strongly encouraged to do as many problems on their own as their time permits from the extra practice problems.

Tests: There are 3 tests in this course. I will count the best 2 of 3 (10% each). Students who will not be able to write these days for a valid reason, e.g. religious or illness (medical note is required), must inform both Lisa and myself. An alternative plan will be conjured to ensure you have equal opportunity as your peers to be assessed.

Final Exam: There will be a Final Exam at the end of the year. The date and time will be scheduled by the registrar.

Course Withdrawal: The final date that you may drop this course without academic penalty is Friday, February 6th, 2026.

Artificial Intelligence (AI): Artificial Intelligence (AI) tools, such as ChatGPT and similar platforms, can be valuable resources for clarifying concepts, exploring examples, and enhancing your understanding of course material. You are encouraged to use these tools for learning support, provided that you critically evaluate any information they provide. However, using AI to generate answers for graded assignments or exams is strictly prohibited and will be considered academic misconduct. All submitted work must represent your own independent effort in accordance with the University's Academic Integrity policy.

Students with Disabilities or Chronic Conditions: Reasonable accommodations are available for students with a documented disability or chronic condition. It is the student's responsibility to request these accommodations. Students who may require accommodations to fully participate in this course should contact Student Accessibility Services (SC0003) at (807) 343-8047.

Assignment – Due Dates

1	Fri, Sept 12	6	Fri, Oct 31	11	Fri, Jan 9	16	Fri, Feb 27
2	Fri, Sept 19	7	Fri, Nov 7	12	Fri, Jan 16	17	Fri, Mar 6
3	Fri, Sept 26	8	Fri, Nov 14	13	Fri, Jan 30	18	Fri, Mar 13
4	Fri, Oct 3	9	Fri, Nov 21	14	Fri, Feb 6	19	Fri, Mar 27
5	Fri, Oct 24	10	Fri, Nov 28	15	Fri, Feb 13	20	Fri, Mar 27

Factoring Major Assignment	Due: Thurs, Oct 23 rd
Graphing Major Assignment	Due: Thurs, Jan 15 th
Trigonometry Major Assignment	Due: Thurs, Mar 26 th

Day	Topic	Day	Topic
1	Course Intro 0.1 – Real #s and Algebra Essentials	25	4.1 – Exponential Functions
2	0.2 – Solving Linear Equations	26	4.2 – Logarithmic Functions
3	0.3 – Linear Models and Applications	27	4.3 – Log. Properties and Equations
4	0.4 – Exponent Laws	28	4.4 – Expon. and Logarithmic Models
5	0.5 – Radicals and Rational Expressions	29	Test #2 - Review
6	0.6 – Polynomials	30	Test #2 (0.11 – 3.3)
7	0.7 – Factoring Polynomials	31	5.1 – Angles
8	0.8 – Solving Quadratic Equations	32	5.2 – Right Angle Trigonometry
9	0.9 – Rational Expressions	33	5.3 – Unit Circle
10	0.10 – Inequalities and Absolute Values	34	5.4 – The Other Trig Functions
11	Test #1 - Review	35	5.5 – Graph of Sin and Cos Functions
12	Test #1 (0.1 – 0.8)	36	5.6 – Graph of Tan and Inverse Trig Fcts
13	0.11 – Solv. Inequalities of Higher Degree	37	5.7 – Solving Trig Eqns with Identities
14	1.1 – Rectangular Coordinate System	38	5.8 – Other Trig Identities
15	1.2 – Linear Equations in One Variable	39	5.9 – Solving Trigonometric Equations
16	1.3 – Quadratic Relations	40	5.10 – Sine Law
17	1.4 – Graphing Quadratic Relations	41	5.11 – Cosine Law and Polar Coord.
18	2.1 – Functions and Function Notation	42	6.1 – Systems of Linear Equations
19	2.2 – Combining Functions	43	Test #3 - Review
20	2.3 - Transformations	44	Test #3 (4.1 – 5.9)
21	2.4 – Solving Equations of Higher Degree	45	6.2 – Parabolas
22	3.1 – Behaviour of Graphs	46	6.3 – The Ellipse
23	3.2 – Power and Polynomial Functions	47	Final Exam Review
24	3.3 – Graphing Rational Functions	48	Work Period

Day	1	2	3	4	5	6	7	8	9	10	11	12
Date	Sept 2	Sept 4	Sept 9	Sept 11	Sept 16	Sept 18	Sept 23	Sept 25	Sept 30	Oct 2	Oct 7	Oct 9

Day	13	14	15	16	17	18	19	20	21	22	23	24
Date	Oct 21	Oct 23	Oct 28	Oct 30	Nov 4	Nov 6	Nov 11	Nov 13	Nov 18	Nov 20	Nov 25	Nov 27

Day	25	26	27	28	29	30	31	32	33	34	35	36
Date	Jan 6	Jan 8	Jan 13	Jan 15	Jan 20	Jan 22	Jan 27	Jan 29	Feb 3	Feb 5	Feb 10	Feb 12

Day	37	38	39	40	41	42	43	44	45	46	47	48
Date	Feb 24	Feb 26	Mar 3	Mar 5	Mar 10	Mar 12	Mar 17	Mar 19	Mar 24	Mar 26	Mar 31	Apr 2