

JARVIS COLLEGIATE INSTITUTE
MAT2L Course Outline 2009-2010

This Course Outline is based upon the Ministry of Education and Training Ontario Curriculum for the Grade 10 Locally Developed Compulsory Credit Course for Mathematics as per the document of 2005.

Board:	Toronto District School Board
School:	Jarvis Collegiate Institute
Curriculum Leader:	Terry Paradellis
Developing Teachers:	Terry Paradellis
Date of Revision:	June 2009
Course Title:	Locally Developed Compulsory Credit Course, Mathematics, Grade 10
Grade:	10
Code:	MAT2L
Credit Value:	1.0
Prerequisite:	A Grade 9 Mathematics credit
Textbook:	Math Essentials 10, McGraw-Hill Ryerson, 2005
Resources:	Teacher's Resource for Math Essentials 10 Course Profile for MAT2L (2005) Teacher-made Worksheets Algebra with Pizzazz & Pre-Algebra with Pizzazz Manipulatives, Graphing Calculators, Fathom & Geometers' Sketchpad

Course Description

This course emphasizes the extension of mathematical knowledge and skills to prepare students for success in their everyday lives, in the workplace, and in the Grade 11 Mathematics Workplace Preparation course. The course is organized in three strands related to money sense, measurement, and proportional reasoning. In all strands, the focus is on strengthening and extending key foundational mathematical concepts and skills by solving authentic, everyday problems. Students have opportunities to extend their mathematical literacy and problem-solving skills and to continue developing their skills in reading, writing, and oral language through relevant and practical math activities.

Strands

Extending Money Sense	31 periods
Extending Understanding of Measurement	47 periods
Extending Understanding of Proportional Reasoning	25 periods

Program Planning Considerations

Exceptional Students:	Additional time will be allowed for tests. Additional accommodations will be provided in consultation with the Guidance, Special Education and ESL departments.
Technology:	Manipulatives, Graphing Calculators, and Geometer's Sketchpad will be utilized for hands-on and technology-related applications.
Career Education:	Links to related fields will be established throughout the course.
Co-operative Education:	These will be provided in association with Guidance Department.
Mathematics Anxiety:	Attention will be addressed according to the following: <ul style="list-style-type: none">• Cultural perspectives• Positive reinforcements• Variety of assessment techniques• Group structures• Consideration for Learning Styles

Learning Skills

Assessment of the learning skills will be done on an ongoing basis throughout the academic year by observations of students at work, checklists and interviews. This will include:

Classwork/homework	(Work habits, homework and organization)
Completed work and seeking assistance	(Organization and initiative)
Persistence and independence at tasks	(Working independently and initiative)
Extension of task	(Organization and initiative)
Achievement of group goals	(Team work)

Assessment Strategies

A variety of teaching/assessment strategies to address students' needs will be used during the school year. Formative assessments will be ongoing through out the academic year. These may include:

- Diagnostic assessment
- Formative assessment
- Performance assessment
- Portfolio assessment
- Rubrics
- Checklists

Term Summative Evaluations (70% Term Work)

- Tests, quizzes, tasks and other forms of term summative evaluations will occur throughout the academic year at the end of units of work as outlined in the accompanying course outline.
- Students will be provided with reasonable opportunities to master skills relating to the achievement of the curriculum expectations before assessment and evaluation occurs.
- Major evaluations will be announced at least one week in advance.
- Accommodations will be made for school activities, statutory holidays, religious days, cultural days, sports events and other occurrences that may impact on any scheduled evaluation. It is the student's responsibility to notify teachers of such absences in advance and to make up missed work.
- Absence on the day of an evaluation must be documented. If a student must miss an evaluation, s/he is expected to:
 - a) see the teacher before the absence to arrange for an alternative date to make up the evaluation; or
 - b) in case of illness or unexpected absence, present a note to the teacher, signed by a parent or guardian, immediately upon their return to explain the absence. An alternate evaluation will then be scheduled at a mutually convenient time.
- The Jarvis Late Policy applies to all assignments and evaluations. See your Agenda book.
- Cheating will not be tolerated in any form and will be dealt with appropriately.

Final Mark Calculation

Calculation of the Term Mark will be based upon the *Categories* of the *Achievement Chart*. This chart is meant to assist teachers in planning instruction and learning activities for the achievement of the curriculum expectations. It is also used in designing assessment and evaluation tools and in providing feedback to students. Each mathematical topic will contain each category in the chart due to the integrated nature of the discipline in mathematics. Final marks will be calculated as follows:

Term Work:	70%	Levels of Achievement:
Knowledge and Understanding:	35%	Level 1: 50 - 59%
Application:	35%	Level 2: 60 – 69%
Thinking and Inquiry:	15%	Level 3: 70 – 79%
Communication:	15%	Level 4: 80 - 100%
Final Summative Evaluations:	30%	

Reporting

Report #1	Report #2	June Report
100% Term Work	100% Term Work (Cumulative Sept – Feb)	70% Term Work + 30% Final Summative Evaluations (Cumulative Sept to June)

Communication

Access to extra help and mark records. Students are encouraged to consult their teachers on a regular basis for extra help and guidance as it relates to improving their academic performance. Students are also expected to discuss strategies for improving their grades with their teachers. Students are expected to view their report cards as an indication of their current achievement and discuss with teachers for clarification.

Communication with Parents/Guardians. Comments pertaining to academic achievement and learning skills are placed on the report cards are primarily to provide feedback for parents/guardians as well as students. Parent/guardian nights can be used for one to one discussion. At times it may be necessary to contact parents/guardians by telephone to discuss a student's performance.

Parents/guardians are also encouraged to contact teachers as and when the need arises.

JARVIS COLLEGIATE INSTITUTE
MAT2L Daily Course Outline 2009-2010

Textbook: Math Essentials 10, McGraw-Hill Ryerson, 2005

Strand #1: Extending Money Sense (31 periods)

Overall Expectations:

- To solve problems drawn from everyday situations involving money, demonstrating skill, and understanding in the use of decimal numbers;
- To communicate information about money sense;
- To use literacy skills (reading, writing, listening, and speaking) to extend their money sense.

Strand #2: Extending Understanding of Measurement (47 periods)

Overall Expectations:

- To make estimates and measurements to extend understanding of the metric system;
- To make estimates and measurements to extend understanding of the Imperial system;
- To solve problems involving measurements of circles, rectangles, cylinders, and rectangular prisms, using metric units in applications drawn from everyday life and the workplace;
- To communicate information about measurement concepts;
- To use literacy skills (reading, writing, listening, and speaking) to extend understanding of measurement.

Strand #3: Extending Understanding of Proportional Reasoning (25 periods)

Overall Expectations:

- To solve problems drawn from everyday situations, demonstrating skill and understanding in the use of fractions, percentages, ratios, and rates;
- To communicate information about proportional reasoning, drawn from a variety of sources;
- To use literacy skills (reading, writing, listening, and speaking) to extend understanding of proportional reasoning.

Per #	TOPIC	Section	ASSIGNMENT	Supplementary Resources
UNIT #1: WORKING FOR OUR MONEY (11 periods)				
1 & 2	Looking for work – part-time jobs	1.1	pp. 1-5	
3 & 4	Skills Practice: Working with large numbers Rates of Pay	1.2	pp. 7-8 pp. 8-11	Profile Activity 4.1, 4.3
5	Take-home pay – percents & commissions	1.3	pp. 12-15	
6	You deserve a pay raise – graphs & calculating pay	1.4	pp. 16-19	
7	Can you afford it? – graphs & budgeting	1.5	pp. 20-23	
8 & 9	Tech Tip: Bar & circle graphs using technology		pp. 24-27	Profile Activity 1.3, 1.5
10	Review		pp. 28-29	
11	TASK: Saving up		p. 30	
UNIT #2: SPENDING MONEY (8 periods)				
1 & 2	Tuning your estimating skills – estimating taxes	2.1	pp. 31-35	
3	Clothing sale – discount prices	2.2	pp. 36-39	
4	Skills Practice: Writing cheques What do I owe – rounding & calculating percents	2.3	pp. 40-41 pp. 42-45	
5	The price of getting fit – calculating total prices	2.4	pp. 46-49	
6	Graphs can be misleading	2.5	pp. 50-53	
7	Review		pp. 54-55	
8	TASK: Party On!		p. 56	
UNIT #3: LINEAR MEASUREMENT: METRIC (7 periods)				
1	Introduction to metric measure	3.1	pp. 57-61	See Grade 9 Profile Activities
2	Metric lengths – personal references	3.2	pp. 62-65	Profile Activity 5.1
3	Skills Practice: Ratios		pp. 66-67	
4	A matter of scale – ratios & measurement	3.3	pp. 68-71	
5	From here to there – scale diagrams & measurement	3.4	pp. 72-75	
6	Review		pp. 76-77	
7	TASK: Hiking the Bruce Trail		p. 78	

Per #	TOPIC	Section	ASSIGNMENT	Supplementary Resources
UNIT #4: LINEAR MEASUREMENT: IMPERIAL (8 periods)				
1 & 2	We still use Imperial – equivalent fractions	4.1	pp. 79-83	
3	Reading Imperial measures – ordering & rounding	4.2	pp. 84-87	
4	Measuring Imperial lengths – converting units	4.3	pp. 88-91	
5	What’s the distance? – personal references	4.4	pp. 92-95	
6	Floor plans – scale diagrams in Imperial	4.5	pp. 96-99	Profile Activity 5.1
7	Review		pp. 100-101	
8	TASK: Plan a parking lot		p. 102	Profile Activity 7.2
UNIT #5: PROPERTIES OF CIRCLES (9 periods)				
1	Measuring circles – parts & lengths	5.1	pp. 103-107	
2	How are circumference & diameter related?	5.2	pp. 108-111	Profile Activity 2.2
3	More about Pi -circumference	5.3	pp. 112-115	
4 & 5	Formulas for circumference – parts of circles	5.4	pp. 116-119	
6 & 7	Perimeters of composite shapes	5.5	pp. 120-123	
8	Review		pp. 124-125	
9	TASK: Bikes, Boards & Blades		p. 126	
UNIT #6: CIRCLES & ANGLES (9 periods)				
1 & 2	Fractions of circles – equivalent fractions & decimals	6.1	pp. 128-131	Profile Activity 2.1
3	Measures of angles	6.2	pp. 132-135	
4 & 5	Drawing circle graphs	6.3	pp. 136-139	
6	Reading circle graphs	6.4	pp. 140-143	
7	Angles & directions	6.5	pp. 144-147	
8	Review		pp. 148-149	
9	TASK: Sports Survey		p. 150	
UNIT #7: GETTING THE RIGHT MIX (16 periods)				
1 & 2	Talk ratio & rate Skills Practice: Equivalent ratio	7.1	pp. 151-155 pp. 156-157	
3	Party mixes - ratios	7.2	pp. 158-161	
4	The artist in you - proportions	7.3	pp. 162-165	
5	Skills Practice: Working with line graphs		pp. 166-167	
6	Win, lose or draw – three-term ratios	7.4	pp. 168-171	
7	The hard facts on cement mixing - proportions	7.5	pp. 172-175	
8	Personal space – unit rates	7.6	pp. 176-179	Profile Activity 3.1
9	Take a number – comparing unit rates	7.7	pp. 180-183	
10 & 11	Where will it all go? – rates, decimals, percents	7.8	pp. 184-187	
12	Drive green and save – ratios, rates & line graphs	7.9	pp. 188-191	
13 & 14	Tech tips – Line graphs using technology		pp. 192-193	Profile Activities 1.3, 1.5
15	Review		pp. 194-195	
16	TASK: Spreading fertilizer on the soccer field		p. 196	
UNIT #8: PLANNING A TRIP (14 periods)				
1	Planning trip dates – dates & time	8.1	pp. 197-201	
2 & 3	Time zones Skills Practice: Crossing time zones	8.2	pp. 202-205 pp. 206-207	
4 & 5	Getting there by plane – schedules & time zones Skills Practice: Arrival times	8.3	pp. 208-211 pp. 212-213	Profile Activity 4.2
6 & 7	Skills Practice: Travel times (12-h clock) Schedules & 24-h clock Skills Practice: Travel time (24-h clock)	8.4	pp. 214-215 pp. 216-218 pp. 219	
8	What’s the temperature? – personal references	8.5	pp. 220-223	Profile Activity 1.4
9	Making smart trip decisions – comparing costs	8.6	pp. 224-227	
10	Choosing a hotel – misleading graphs	8.7	pp. 228-231	
11	How much should I bring? - unit comparisons	8.8	pp. 232-235	
12	Making a budget	8.9	pp. 236-239	
13	Review		pp. 240-241	
14	TASK: Plan a Trip		p. 242	

Per #	TOPIC	Section	ASSIGNMENT	Supplementary Resources
UNIT #9: CIRCLES AND CYLINDERS (10 periods)				
1 & 2	Area of a Circle	9.1	pp. 243-247	Profile Activity 5.4
3	Area of Sectors	9.2	pp. 248-251	
4, 5 & 6	Volume of a Cylinder Skills Practice: Volume of Cylinders	9.3	pp. 252-255 pp. 256-257	Profile Activities 6.1, 6.2
7 & 8	Working with volume units	9.4	pp. 258-261	
9	Review		pp. 262-263	
10	TASK: Packing Drums		pp. 264	
UNIT #10: GARDENS, PATIOS & POOLS (11 periods)				
1 & 2	Measuring Gardens – area of composite figures	10.1	pp. 265-269	
3 & 4	Planning gardens & patios – scale diagrams	10.2	pp. 270-272	Profile Activity 5.5
5	Putting borders on gardens & patios – perimeter & cost	10.3	pp. 274-277	
6 & 7	Pools and ponds - volumes	10.4	pp. 278-281	Profile Activity 6.3
8 & 9	Shopping for materials	10.5	pp. 282-285	
10	Review		pp. 286-287	
11	TASK: Design your own garden		p. 288	Profile Activity 7.2
Cumulative Review (Units #1-10)				
Final Summative Evaluations (30% of Final Mark)				