**EAST YORK COLLEGIATE INSTITUTE**

**MEL3E Course Outline 2015-2016**

This Course Outline is based upon the Ministry of Education and Training Ontario Curriculum for Grade 11 & 12 Mathematics as per the revised document of 2007.

***Board:*** Toronto District School Board

***School:*** East York Collegiate Institute

***Curriculum Leader:*** R.Singh

***Developing Teachers:***

***Date of Revision:*** June 2012

***Course Title:*** Mathematics for Work and Everyday Life, Grade 11, Workplace Preparation

***Grade:*** 11

***Code:*** MEL3E

***Credit Value:*** 1.0

***Prerequisite:*** MPM1D, MFM1P or MAT2L

***Textbook:*** Mathematics for Work and Everyday Life 11, McGraw-Hill Ryerson, 2007

***Resources:*** Teacher’s Resource for Math for Work and Everyday Life 11 (2007) Making Financial Decisions 11, McGraw-Hill Ryerson, 2001

Teacher-made Worksheets

Manipulatives, Graphing Calculators, Fathom, Spreadsheets & Geometers’ Sketchpad

**Course Description**

This course enables students to broaden their understanding of mathematics as it is applied in the workplace and daily life. Students will solve problems associated with earning money, paying taxes, and making purchases; apply calculations of simple and compound interest in saving, investing, and borrowing; and calculate the costs of transportation and travel in a variety of situations. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

**Strands**

Earning and Purchasing 37 periods Saving, Investing and Borrowing 32 periods Transportation and Travel 34 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, Fathom, Spreadsheets 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:

• 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:

* Responsibility
* Organization
* Independent Work
* Collaboration
* Initiative
* Self-Regulation

**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 EAST YORK 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:

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| **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%**

**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

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**Textbook:** Mathematics for Work and Everyday Life 11, McGraw-Hill Ryerson, 2007

**Strand #1: Earning and Purchasing (37 periods)**

Overall Expectations:

• To interpret information about different types of remuneration, and solve problems and make decisions involving different remuneration methods;

• To demonstrate an understanding of payroll deductions and their impact on purchasing power;

• To demonstrate an understanding of the factors and methods involved in making and justifying informed purchasing decisions.

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| **Per #** | **TOPIC** | **Section** | **ASSIGNMENT** | **Supplementary Resources** |
|  |  |  |  |  |
| **UNIT #1: JOBS AND EARNING (10 periods)** | | | | |
| 1, 2 & 3 | Investigating jobs and their related pay – gross pay  Skill Practice – Calculating percent | 1.1 | pp. 7-13 | Internet & classified ads |
| 4 | Ways of being paid for work – daily & weekly pay | 1.2 | pp. 14-19 |  |
| 5 | Calculating gross income | 1.3 | pp. 20-25 |  |
| 6 & 7 | Understanding different pay schedules - fractions | 1.4 | pp. 26-31 |  |
| 8 | Review |  | pp. 32-33 |  |
| 9 & 10 | TASK: Which job do I accept? |  | p. 34 |  |
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| **UNIT #2: NET INCOME AND PURCHASING POWER (9 periods)** | | | | |
| 1 & 2 | Net income & deductions  Skills Practice: Fractions and percents | 2.1 | pp. 35-41 |  |
| 3 | Approximating net income | 2.2 | pp. 42-45 |  |
| 4 | Net income and personal expenses | 2.3 | pp. 46-49 |  |
| 5 & 6 | Purchasing power and living standards | 2.4 | pp. 50-55 |  |
| 7 | Review |  | pp. 56-57 |  |
| 8 & 9 | TASK: Monthly spending plan |  | p. 58 |  |
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| **UNIT #3: MAKING SOUND PURCHASING DECISIONS (18 periods)** | | | | |
| 1 & 2 | Making sound purchasing decisions –estim & round | 3.1 | pp. 59-63 |  |
| 3 & 4 | Incentives to buy – fractions & percents | 3.2 | pp. 64-71 |  |
| 5 & 6 | Understanding incentives – estim, fractions, %s | 3.3 | pp. 72-75 |  |
| 7 & 8 | Approximating sales tax  Skills Practice: Working with fractions | 3.4 | pp. 76-79 |  |
| 9 & 10 | Getting & giving the correct change | 3.5 | pp. 80-85 |  |
| 11 | Unit prices | 3.6 | pp. 86-89 |  |
| 12 & 13 | The cost of “Buy now, Pay later” | 3.7 | pp. 90-95 |  |
| 14 & 15 | Making purchases from other countries | 3.8 | pp. 96-99 |  |
| 16 | Review |  | pp. 100-101 |  |
| 17 & 18 | TASK: Weighing the options |  | p. 102 |  |
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**Strand #2: Saving, Investing and Borrowing (32 periods)**

Overall Expectations:

• To describe and compare services available from financial institutions;

• To demonstrate an understanding of simple and compound interest, and solve problems involving related applications;

• To interpret information about different ways of borrowing and their associated costs, and make and justify informed borrowing decisions.

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| **UNIT #4: WORKING WITH FINANCIAL INSTITUTIONS (11 periods)** | | | | |
| 1 , 2 &  3 | Investigating accounts from financial institutions | 4.1 | pp. 108-112 | Internet research |
| 4 & 5 | Skills Practice: Writing cheques  Keeping your own records | 4.2 | p. 113  pp. 114-119 |  |
| 6 & 7 | Dealing with credit cards | 4.3 | pp. 120-123 | Internet research;  credit card applications |
| 8 & 9 | Reading and interpreting statements | 4.4 | pp. 124-127 |  |
| 10 | Review |  | pp. 128-129 |  |
| 11 | TASK: Does the balance balance? |  |  |  |
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| **Per #** | **TOPIC** | **Section** | **ASSIGNMENT** | **Supplementary Resources** |
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| **UNIT #5: SAVING AND INVESTING (10 periods)** | | | | |
| 1 & 2 | Calculating simple interest | 5.1 | pp. 131-135 |  |
| 3 & 4 | From simple interest to compound interest | 5.2 | pp. 136-139 |  |
| 5 | Tech Tip: TVM Solver for compound interest |  | pp. 140-141 | Graphing calculators |
| 6 | Effects of compounding & interest rate on future value – TVM solver | 5.3 | pp. 142-145 |  |
| 7 | Long-term savings strategies | 5.4 | pp. 146-149 |  |
| 8 | Review |  | pp. 150-151 |  |
| 9 & 10 | TASK: Financial independence for all |  | p. 152 |  |
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| **UNIT #6: THE NATURE OF BORROWING MONEY (11 periods)** | | | | |
| 1, 2 & 3 | Investigating personal loans | 6.1 | pp. 153-157 | Internet research |
| 4 & 5 | Paying back borrowed money | 6.2 | pp. 158-161 | TVM Solver |
| 6 & 7 | Options for repaying borrowed money | 6.3 | pp. 162-165 | TVM Solver |
| 8 | Establishing & maintaining a credit rating | 6.4 | pp. 166-169 |  |
| 9 | Review |  | pp. 170-171 |  |
| 10 & 11 | TASK: A good loan is no loan |  | p. 172 |  |
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**Strand #3: Transportation and Travel (34 periods)**

Overall Expectations:

• To interpret information about owning and operating a vehicle, and solve problems involving the associated costs;

• To plan and justify a route for a trip by automobile, and solve problems involving the associated costs;

• To interpret information about different modes of transportation, and solve related problems.

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| **UNIT #7: OWNING AND OPERATING A VEHICLE (16 periods)** | | | | |
| 1 & 2 | An Ontario driver’s license – DST problems | 7.1 | pp. 177-181 | Internet research |
| 3 & 4 | Buying a used car | 7.2 | pp. 182-185 | Classified ads |
| 5 & 6 | Buying a new car | 7.3 | pp. 186-189 | TVM Solver |
| 7 & 8 | Leasing a new car | 7.4 | pp. 190-193 | Internet research |
| 9 | Using a vehicle for business | 7.5 | pp. 194-197 |  |
| 10 | Automobile insurance | 7.6 | pp. 198-201 | Internet research |
| 11 | The responsibility of safe drivers | 7.7 | pp. 202-203 |  |
| 12 & 13 | The cost of operating a vehicle | 7.8 | pp. 204-207 |  |
| 14 | Review |  | pp. 209-209 |  |
| 15 & 16 | TASK: How much does it cost? |  | p. 210 |  |
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| **UNIT #8: TRAVELLING BY AUTOMOBILE (9 periods)** | | | | |
| 1 & 2 | Reading maps for driving | 8.1 | pp. 211-215 | Road maps |
| 3 | Planning local driving routes | 8.2 | pp. 216-219 |  |
| 4 | Planning a longer drive | 8.3 | pp. 220-223 |  |
| 5 & 6 | The cost of traveling by automobile | 8.4 | pp. 224-227 | Internet research |
| 7 | Review |  | pp. 228-229 |  |
| 8 & 9 | TASK: Vacationing in Myrtle Beach |  | p. 230 |  |
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| **UNIT #9: COMPARING MODES OF TRANSPORTATION (9 periods)** | | | | |
| 1 | Investigating the impact of daily travel | 9.1 | pp. 232-235 |  |
| 2 & 3 | Interpreting routes and schedules | 9.2 | pp. 236-239 | Bus & train schedules |
| 4 | Renting a vehicle | 9.3 | pp. 240-243 |  |
| 5 & 6 | Travel options | 9.4 | pp. 244-247 | Research options |
| 7 | Review |  | pp. 248-249 |  |
| 8 & 9 | TASK: Getting there a different way |  | p. 250 |  |
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| **Cumulative Review (Units #1-9)**  **Final Summative Evaluations (30% of Final Mark)** | | | | |