



# **Essential Skills**

# **Academic Course**

# **Package**

**For Mandatory Delivery**

**September 2012**

**(Updated August, 2012)**

Notes:

Replacement

This package of courses will replace the following courses in all Plans of Training:

MA1060	Basic Math
CM2150	Workplace Communications
MR1220	Customer Service
SP2330	Quality Assurance / Quality Control
MC1050	Introduction to Computers
SD1700	Workplace Skills
SD1710	Job Search Techniques
SD1720	Entrepreneurial Awareness
AP1100	Introduction to Apprenticeship

Math

The former MA1060 course has been replaced with 2 math courses.

AM1100-MATH ESSENTIALS is 30 hours in length. It provides a review of basic math skills and is transferable between entry level training blocks in various trade programs.

AM1110-1360 – (*trade name*) Math Fundamentals is 30 hours in length. It provides theoretical and practical orientation to core math skills in a trade specific environment. This course is not transferable between entry level training blocks in various trade programs, and is not eligible for Prior Learning Assessment.

Math Fundamentals will have a unique course number in most Plans of Training. A list of unique course numbers (current August 2012) for each trade is included in Appendix A of this document.

All trades must now include AM1100-Math Essentials. Trades which included the MA1060 Basic Math must now include both new math courses.

The disclaimer concerning math in the program structure will now read:

*A student who can meet the mathematics requirement through an ACUPLACER® test may be exempted from AM1100-Math Essentials. Please check with your training institution.*

## **AM1100 Math Essentials**

**Note:** It is recommended that AM1100 be delivered in the first semester of the Entry Level training program.

### **Learning Outcomes:**

- Demonstrate knowledge of the numeracy skills required to begin the 2<sup>nd</sup> level math course.
- Demonstrate knowledge of mathematics as a critical element of the trade environment.
- Demonstrate knowledge of mathematical principles in trade problem solving situations
- Demonstrate the ability to solve simple mathematical word problems

**Duration:** 30 Hours

**Pre-Requisite(s):** None

### **Objectives and Content:**

*Wherever possible, the instructor should use trade specific examples to reinforce the course objectives*

1. Use multiplication tables from memory.
2. Perform whole number operations.
  - Read, write, count, round off, add, subtract, multiply and divide whole numbers.
3. Apply the order of operations in math problems.
4. Perform fraction and mixed number operations.
  - Read, write, add, subtract, multiply and divide fractions.
5. Perform decimal operations.
  - Read, write, round off, add, subtract, multiply and divide decimals.

6. Perform percent/decimal/fraction conversion and comparison.
  - Convert between fractions, decimals and percents.
7. Perform percentage operations.
  - read and write percentages
  - calculate base, rates and percentages
8. Perform ratio and proportion operations.
  - use a ratio comparing two quantities with the same units
  - use a proportion comparing two ratios
9. Use the imperial measurement system in math problems.
  - identify units of measurement for
    - Length
    - Mass
    - Area
    - Volume
    - Capacity
10. Use the metric measurement system in math problems.
  - identify units of measurement for
    - Length
    - Mass
    - Area
    - Volume
    - Capacity

To emphasize or further develop specific knowledge objectives, students will be asked to complete practical demonstrations which confirm proper application of mathematical theory to job skills.

## **AM1110 – AM1360      (*Unique Name*) Math Fundamentals**

### **Learning Outcomes:**

- Demonstrate knowledge of mathematical concepts in the performance of trade practices.
- Demonstrate knowledge of mathematics as a critical element of the trade environment.
- Solve mathematical word problems
- Demonstration knowledge of mathematical principles for the purposes of problem solving, job and materials estimation, measurement, calculation, system conversion, diagram interpretation and scale conversions, formulae calculations, and geometric applications.

**Duration:**                    30 Hours

**Pre-Requisite(s):**    AM1100        Math Essentials

### **Objectives and Content:**

*The instructor is required to use trade specific examples to reinforce the course objectives.*

1. Employ percent/decimal/fraction conversion and comparison in trade specific situations.
2. Apply ratios and proportions to trade specific problems.
3. Use the Imperial Measurement system in trade specific applications.
4. Use the Metric Measurement system in trade specific applications.
5. Complete Imperial/Metric conversions in trade specific situations
  - i. convert between imperial and metric measurements
  - ii. convert to another unit within the same measurement system

6. Manipulate formulas using cross multiplication, dividing throughout, elimination, and substitution to solve trade specific problems, such as:
  - i. right angle triangles
  - ii. area
  - iii. volume
  - iv. perimeter
7. Perform calculations involving geometry that are relevant to the trade, such as:
  - i. angle calculations
  - ii. circle calculations
8. Use practical math skills to complete administrative trade tasks:
  - i. material estimation
  - ii. material costing
  - iii. time & labour estimates
  - iv. taxes & surcharges
  - v. markup & projecting revenue

**Notes:**

1. To emphasize or further develop specific knowledge objectives, students will be asked to complete practical demonstrations which confirm proper application of mathematical theory to job skills.
2. This course has been designated as NON-TRANSFERABLE to other trades programs, and NOT ELIGIBLE FOR PRIOR LEARNING ASSESSMENT. Students completing training in this trade program are required to complete this math course.

## **CM2160    Communication Essentials**

### **Learning Outcomes:**

- Demonstrate knowledge of the importance of well-developed writing skills in the workplace and in career development.
- Demonstrate knowledge of the purpose of various types of workplace correspondence.
- Demonstrate knowledge of the principles of effective workplace writing.
- Demonstrate knowledge of standard formats for letters and memos.
- Demonstrate knowledge of principles related to writing effective letters and memos.
- Demonstrate the ability to prepare and deliver an oral presentation.
- Demonstrate knowledge of the importance of effective interpersonal skills in the workplace.

**Duration:**            45 Hours

**Pre-Requisite(s):**    None

### **Objectives and Content:**

*Wherever possible, the instructor is expected to use trade specific examples to reinforce the course objectives.*

1. Identify the principles for writing clear, concise, complete sentences and paragraphs which adhere to the conventions of grammar, punctuation, and mechanics.
2. Identify the principles of effective workplace writing.
  - i. Describe the value of well-developed writing skills to career success
  - ii. Discuss the importance of tone, and language or word choice in workplace communication, regardless of the circumstances
  - iii. Demonstrate an awareness of cultural differences when preparing workplace correspondence

- iv. Describe the writing process as it applies to workplace communication
  - planning
  - writing
  - editing/revising
- v. Identify the parts of a business letter and memo, and when each should be used in the workplace
- vi. Identify the standard formats for business letters and memos
- vii. Identify guidelines for writing sample letters and memos which convey:
  - acknowledgment
  - routine request
  - routine response
  - complaint
  - refusal
  - persuasive request
  - letters of appeal

3. Identify types of informal workplace documents.

- i. Identify types & purposes of reports
  - Incident
  - Process
  - Progress
- ii. Identify common trade specific forms
- iii. Describe primary and secondary methods used to gather information
- iv. Discuss the importance of accuracy and completeness in reports and forms

4. Identify the elements of presentations used in the workplace.

- i. Identify presentation types
  - impromptu
  - informative
  - demonstration
  - persuasive

- ii. Identify the components of an effective presentation
  - eye contact
  - body language
  - vocal qualities
  - audience analysis
  - multimedia tools
  - keeping on topic
- 5. Demonstrate an understanding of interpersonal communications in the workplace.
  - i. Identify listening techniques
  - ii. Demonstrate an understanding of group dynamics
  - iii. Describe the importance of contributing information and expertise in the workplace
  - iv. Describe the importance of respectful and open communication in the workplace
  - v. Identify methods to accept and provide feedback in a constructive and considerate manner
  - vi. Explain the role of conflict in a group to reach solutions
- 6. Identify acceptable workplace uses of communication technologies
  - i. Cell / Smart Phone etiquette
  - ii. Voice mail
  - iii. E-mail
  - iv. Teleconferencing / videoconferencing for meetings and interviews
  - v. Social networking
  - vi. Other emerging technologies

**Practical Requirements:**

1. Write well-developed, coherent, unified paragraphs.
2. Write sample letters and memos.
3. Write one short informal report.
4. Complete a selection of at least 3 trade-related forms.
5. Deliver an effective oral presentation.

## **SD1760      Workplace Essentials**

**Note:** It is recommended that SD1760 be delivered in the second half of the Entry Level training program.

### **Learning Outcomes:**

- Demonstrate knowledge of workplace essentials in the areas of meetings, unions, workers compensation, workers rights, and human rights
- Demonstrate knowledge of good customer service practices
- Demonstrate knowledge of effective job search techniques

**Duration:**            45 Hours

**Pre-Requisite(s):**    None

### **Objectives and Content:**

*Wherever possible, the instructor is expected to use trade specific examples to reinforce the course objectives.*

1. Identify common practices related to workplace meetings
  - i. Identify and discuss meeting format and preparation required for a meeting
  - ii. Explain the purpose of an agenda
  - iii. Explain the expected roles, responsibilities, and etiquette of meeting participants
2. Define unions and identify their role in the workplace
  - i. Identify the purpose of unions
  - ii. Identify a common union structure
  - iii. Identify the function of unions in this trade

3. Demonstrate an understanding of the Worker's Compensation process.
  - i. Describe the aims, objectives, regulations and benefits of the Workplace Health, Safety and Compensation Commission
  - ii. Explain the role of the Workers Advisor
  - iii. Explain the internal review process
4. Demonstrate an understanding of worker's rights.
  - i. Define labour standards
  - ii. Identify regulations, including:
    - o hours of work & overtime
    - o termination of employment
    - o minimum wages & allowable deductions
    - o statutory holidays, vacation time, and vacation pay
5. Demonstrate an understanding of Human Rights issues
  - i. Examine the Human Rights Code and explain the role of the Human Rights Commission
  - ii. Define harassment in various forms and identify strategies for prevention
    - Direct
    - Systemic
    - Adverse effect
  - iii. Identify gender and stereotyping issues in the workplace
  - iv. Define basic concepts and terms related to workplace diversity including age, race, culture, religion, socio-economic status, and sexual orientation.
6. Demonstrate an understanding of quality customer service
  - i. Explain why quality service is important
  - ii. Identify barriers to quality customer service
  - iii. Identify customer needs & common methods for meeting them
  - iv. Identify and discuss the characteristics & importance of a positive attitude
  - v. Identify the importance of demonstrating good communication skills including body language, listening, questioning, and when using electronic communication devices.
  - vi. Identify techniques for interacting with challenging customers to address complaints and resolve conflict.

7. Demonstrate an understanding of effective job search techniques
  - i. Identify and explain employment trends, opportunities, and sources of employment
  - ii. Identify and discuss essential skills for the trades as outlined by Human Resources and Skills Development Canada
  - iii. Review job ads and identify the importance of fitting qualifications to job requirements.
  - iv. Identify the characteristics of effective resumes, the types of resumes, and principles of resume formatting
  - v. Identify the characteristics of an effective cover letter
  - vi. Identify the components of a portfolio, and discuss the value of establishing and maintaining a personal portfolio.
  - vii. Identify the common characteristics of the job interview process:
    - Pre-interview preparation
    - Interview conduct
    - Post-interview follow up

**Practical Requirements:**

1. Create a resume.
2. Create a cover letter.
3. Participate in a mock job interview

# MC1060 Computer Essentials

## Course Outcomes:

- Demonstrate knowledge of computer systems and their operation.
- Demonstrate knowledge of popular software packages and their applications.
- Demonstrate knowledge of security issues related to computers.

**Duration:** 15 Hours

**Pre-Requisite(s):** None

## Objectives and Content:

*Wherever possible, the instructor is expected to use trade specific examples to reinforce the course objectives.*

1. Identify the major external components of a microcomputer system.
  - i. Input devices
  - ii. Output devices
  - iii. Central control unit
2. Use operating system software
  - i. Start and quit a program
  - ii. Use the help function
  - iii. Use the find function
  - iv. Maximize and minimize a window
  - v. Use the task bar
  - vi. Adjust desktop settings such as screen savers, screen resolution, and backgrounds
  - vii. Shut down a computer
3. Perform file management commands.
  - i. Create folders
  - ii. Copy files and folders
  - iii. Move files and folders
  - iv. Rename files and folders
  - v. Delete files and folders

4. Use word processing software to create documents
  - i. Enter text
  - ii. Indent and tab text
  - iii. Change text attributes (bold, underline, font, etc.)
  - iv. Change layout format (margins, alignment, line spacing)
  - v. Spell check and proofread
  - vi. Edit text
  - vii. Save document
  - viii. Print document
  - ix. Close document
  - x. Retrieve documents
5. Use spreadsheet software to create spreadsheets
  - i. Enter data in cells
  - ii. Create formulas to add, subtract, multiply and divide
  - iii. Save spreadsheet
  - iv. Print spreadsheet
  - v. Close spreadsheet
  - vi. Retrieve spreadsheet
6. Access the Internet.
  - i. Access websites using the world wide web(www)
  - ii. Identify examples of web browsers
  - iii. Use search engines with common searching techniques
  - iv. Describe security issues
7. Use electronic mail.
  - i. Describe e-mail etiquette
    - Grammar and punctuation
    - Privacy and legal issues when sharing and forwarding e-mail
    - Work appropriate content
    - Awareness of employer policies
  - ii. Manage e-mail using the inbox, sent, and deleted folders
  - iii. Send an e-mail message with attachment(s)
  - iv. Print e-mail

## **AP1101 Introduction to Apprenticeship**

### **Learning Outcomes:**

- Demonstrate knowledge of how to become a registered apprentice.
- Demonstrate knowledge of the steps to complete an apprenticeship program.
- Demonstrate knowledge of various stakeholders in the apprenticeship process.
- Demonstrate knowledge of the Red Seal Program.

**Duration:** 15 hours

**Pre-Requisite(s):** None

### **Objectives and Content:**

1. Define the following terms:
  - i. Apprenticeship
  - ii. Apprentice vs. Registered Apprentice
  - iii. Journeyperson vs. Certified Journeyperson
  - iv. Certificate of Apprenticeship
  - v. Certificate of Qualification
  - vi. Recognition of Prior Learning
  - vii. Dual certification
2. Explain the apprenticeship system in Newfoundland and Labrador and the roles and responsibilities of those involved.
  - i. Registered apprentice
  - ii. Training institution
  - iii. Employer
  - iv. Journeyperson
  - v. Department of Advanced Education and Skills
    - Industrial Training Section
    - Standards and Curriculum Section
  - vi. Provincial Trade Advisory Committees
  - vii. Provincial Apprenticeship and Certification Board

3. Identify the Conditions Governing Apprenticeship.
4. Describe the training and educational requirements.
  - i. Pre-employment (entry level) training
  - ii. Block release
  - iii. On-the-job
5. Explain the steps in the registered apprenticeship process.
  - i. Criteria for eligibility
    - Entrance Requirements as per Conditions of Apprenticeship
    - Employment
  - ii. Registration Process
    - Application requirements
  - iii. Memorandum of Understanding
    - Probation period
    - Cancellation
  - iv. Record of Occupational Progress (Logbook)
    - Signing off skills
    - Recording hours
    - Updating PDO on progress
  - v. Class Calls
    - Schedule
    - EI Eligibility
    - Direct Entry
    - Advanced level
  - vi. Block Exams
  - vii. Progression
    - Schedule
    - Wage rates
  - viii. Cancellation of Apprenticeship
  - ix. Practical Examinations
  - x. Provincial and Interprovincial examinations
  - xi. Certification
    - Certification of Apprenticeship
    - Certification of Qualification
    - Provincial certification
    - Interprovincial Red Seal endorsement

6. Explain the Interprovincial Standards Red Seal Program.
  - i. Designated Red Seal trade
  - ii. The National Occupational Analysis (NOA)
  - iii. Interprovincial (IP) Red Seal Endorsement Examination
  - iv. Relationship of NOA to IP Examination
  - v. Qualification recognition and mobility
7. Identify the current financial incentives available to apprentices.
8. Explain the NL apprenticeship and trades certification division's out-of-province apprenticeship policy.

**Practical Requirements:**

1. Use the Provincial Apprenticeship and Trades Certification web site at [www.gov.nl.ca/app](http://www.gov.nl.ca/app) to:
  - i. Locate, download, and complete the Application for Apprenticeship and Memorandum of Understanding (MOU).
  - ii. Locate, download, and complete the Out of Province registration forms
    - Application for Apprenticeship (out of province)
    - Letter of Understanding (LOU)
    - Acceptance of Conditions Letter
  - iii. Locate, download, and complete the Work Experience Credits form.
  - iv. Identify the locations of all Industrial Training offices.
  - v. Locate and review the following learning resources relevant to the trade:
    - Study Guide
    - Exam Preparation Guide
    - Plan of Training
2. Use a log book for this trade to:
  - i. Identify the hours for the trade (in-school and on-the-job)
  - ii. Identify the number of blocks
  - iii. Identify the courses in each block
  - iv. Identify the workplace skills to be completed and verified

3. Use the Red Seal Web site, <http://www.red-seal.ca> to retrieve the National Occupational Analyses (NOA) for this trade.

- i. Identify the following components of the NOA:

- Trends
- Scope
- Key Competencies
- Blocks
- Tasks
- Subtasks
- Pie Charts
- Table of Specifications

## APPENDIX A | Math Fundamentals trade specific course numbers

<b>NL COURSE NO.</b>	<b>COURSE TITLE</b>	<b>NOTES</b>
AM1110	Bricklayer Math Fundamentals	
AM1120	Cabinetmaker Math Fundamentals	
AM1130	Carpenter Math Fundamentals	
AM1140	Concrete Finisher Math Fundamentals	
AM1150	Cook Math Fundamentals	
AM1160	Electrician Math Fundamentals - Construction/Industrial Electrician - Residential Electrician	Industrial, Construction and Residential Electrician
AM1170	Heavy Equipment Operator Math Fundamentals	
AM1180	Industrial Math Fundamentals - Industrial Mechanic (Millwright) - Machinist	Industrial Mechanic and Machinist
AM1190	Instrumentation and Control Math Fundamentals	
AM1200	Insulator Math Fundamentals	
AM1210	Lather Math Fundamentals	
AM1220	Mechanical Math Fundamentals - Heavy Equipment Technician - Truck Transport Mechanic - Automotive Service Technician	Heavy Duty Equipment Technician, Truck Transport Mechanic and Automotive Service Technician
AM1230	Metal Fabrication Math Fundamentals	
AM1240	MV Body Repair Math Fundamentals	
AM1250	Oil Heat System Math Fundamentals	
AM1260	Pipe Trade Math Fundamentals - Plumber - Steamfitter/Pipefitter	Plumber and Steam Fitter / Pipe Fitter
AM1270	Powerline Technician Math Fundamentals	
AM1280	Process Math Fundamentals	
AM1290	Refrigeration Math Fundamentals	
AM1300	Sheet Metal Math Fundamentals	
AM1310	Sprinkler System Math Fundamentals	
AM1320	Welding Math Fundamentals	
AM1330	Commercial Driver	
AM1340	Hoisting Math Fundamentals	Boom Truck Operator Mobile Crane Operator Tower Crane Operator (future)
AM1350	Ironworker Math Fundamentals	
AM1360	Powersport Math Fundamentals	Small Equipment Service Technician