

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



**SAULT  
COLLEGE**

**COURSE OUTLINE**

**COURSE TITLE:** Air Conditioning and Heat Pump Inspection

**CODE NO. :** HIC103/OEL579                      **SEMESTER:** W11

**PROGRAM:** Home Inspection Certificate

**AUTHOR:** Laurie Poirier

**DATE:** Fall 2010              **PREVIOUS OUTLINE DATED:** N/A

**APPROVED:**                                      "Laurie Poirier"                                      Fall 2010

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|                         | <b>CHAIR</b> | <b>DATE</b> |
|-------------------------|--------------|-------------|
| <b>TOTAL CREDITS:</b>   | 3            |             |
| <b>PREREQUISITE(S):</b> | n/a          |             |
| <b>HOURS/WEEK:</b>      | 45 hours     |             |

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*For additional information, please contact Laurie Poirier, Chair*  
*School of Continuing Education*  
*(705) 759-2554, Ext. 2665*

**I. COURSE DESCRIPTION:**

The emphasis in this subject is on typical defects of the various types of roof coverings, drainage systems, flashings, skylights, chimneys, and other roof penetrations. Students apply their knowledge of roofing to inspections that focus on system performance, safety concerns, and compliance with existing codes and standards.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

1. Students will learn the proper steps in inspection of Air conditioning and heat pumps, theory and application of the standards of practice set forth by ASHI American society of home inspectors and what to report.
2. Different styles of coils, evaporators, expansion valves and disconnects will be discussed in detail. Problems associated with designs and proper disconnect.
3. Areas of corrosion and how location affects performance, proper installations, proper care and inspection along with safety issues in inspection and operation.
4. Students will learn the difference between Heat pumps and air conditioning units. They will learn how to identify and inspect each according to standards of ASHI.
5. The proper identification of parts required on heat pump and air conditioning
6. Students will learn new designs in heat pumps and air conditioning; understand what SEER represents and EER means.

**III. TOPICS:**

1. ASHI American standards of practice, what to inspect and what not to inspect.

2. Coils, evaporator, condensers and expansion valves, disconnects and safety.
3. Problems in inspection does and do not's
4. What you need to be on a report.
5. Different design between heat pump and air conditioning
6. Identification of parts for heat pumps and air conditioning

#### IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Air Conditioning and Heat Pump Inspection – Carson Dunlop and Associates

#### V. EVALUATION PROCESS/GRADING SYSTEM:

- Quizzes are worth 20% of your final mark
  - Each individual Quiz is worth 5%.
  - There are five quizzes.
  - We will delete the lowest scoring of the five quizzes from your grade.
- The midterm test is worth 20% of your final mark
- The final test is worth 60% of the final mark

The following semester grades will be assigned to students:

| <b>Grade</b> | <b><u>Definition</u></b> | <i>Grade Point Equivalent</i> |
|--------------|--------------------------|-------------------------------|
| A+           | 90 – 100%                | 4.00                          |
| A            | 80 – 89%                 | 3.00                          |
| B            | 70 - 79%                 | 2.00                          |
| C            | 60 - 69%                 | 1.00                          |
| D            | 50 – 59%                 | 0.00                          |
| F (Fail)     | 49% and below            |                               |

CR (Credit) Credit for diploma requirements has been awarded.

S Satisfactory achievement in field /clinical placement or non-graded subject area.

U Unsatisfactory achievement in field/clinical placement or non-graded subject area.

X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the

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|    | requirements for a course.   |
| NR | Grade not reported to Registrar's office.                          |
| W  | Student has withdrawn from the course<br>without academic penalty. |

**VI. SPECIAL NOTES:**Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

**VII. COURSE OUTLINE ADDENDUM:**

The provisions contained in the addendum located on the portal form part of this course outline.