



Correlation of
Modern Refrigeration and Air Conditioning, by Althouse, Turnquist, Bracciano
(Goodheart-Willcox Publisher ©2021)
to
AHRI Curriculum Guide: XIX. Preventative Maintenance

The following chart correlates the *Modern Refrigeration and Air Conditioning* textbook (©2021) to a section of the Curriculum Guide developed by Air-Conditioning, Heating, and Refrigeration Institute (AHRI) and used for PAHRA accreditation.

The chart lists the Curriculum Guide’s knowledge and task competency objectives and the corresponding chapter numbers from *Modern Refrigeration and Air Conditioning*.

For more information on the Partnership for Air-Conditioning, Heating, Refrigeration Accreditation (PAHRA) and related accreditation, please visit: www.pahrahvacr.org



XIX.A. Basic Maintenance	
Knowledge	Textbook Chapter(s)
1. Explain the various types of maintenance programs.	Chapters 3, 28, 30, 31, 32, 33, 38, 40, 41, 42, 43
2. Explain broad tasks and frequencies for a quality maintenance program.	Chapters 3, 28, 30, 31, 32, 33, 38, 40, 41, 42, 43
3. Explain why each step of the preventive maintenance program is necessary.	Chapters 3, 28, 30, 31, 32, 33, 38, 40, 41, 42, 43
4. Explain the benefits associated with proper equipment maintenance.	Chapters 3, 28, 30, 31, 32, 33, 38, 40, 41, 42, 43
Tasks	Textbook Chapter(s)
1. Demonstrate various maintenance tasks.	Chapters 28, 30, 31, 32, 33, 38, 41, 42, 43
2. Develop a preventive maintenance program for:	
a. absorption cooling unit	Chapters 3, 34
b. electric heat system	Chapters 3, 30, 38, 43

**Correlation of *Modern Refrigeration and Air Conditioning* to AHRI Curriculum Guide:
XIX. Preventative Maintenance—page 2**

XIX.A. Basic Maintenance (continued)	
Tasks	Textbook Chapter(s)
c. gas heat system	Chapters 3, 30, 38, 41
d. heat pump system	Chapters 3, 38, 40
e. hydronic systems	Chapters 3, 38, 39
f. ice makers	Chapters 3, 26, 38, 53, 54
g. oil heat system	Chapters 3, 38, 42
h. package heat and cooling unit	Chapters 3, 31, 33, 38
i. refrigeration systems	Chapters 3, 25, 26, 53, 54, 55
j. split system condensing unit and evaporator	Chapters 3, 30, 31, 32, 33, 53, 54, 55
k. walk-in boxes	Chapters 3, 47, 49, 53, 54, 55
l. water-cooled centrifugal chiller	Chapters 3, 33, 34, 53, 54, 55
m. water-cooled reciprocating chiller	Chapters 3, 33, 53, 54, 55
3. Develop a list of tools needed to perform the preventive maintenance program.	Chapters 3, 7, 8, 10, 11, 17, 30, 32, 33, 53, 54, 55
4. Develop a preventive maintenance check sheet.	Chapters 3, 7, 8, 10, 11, 17, 30, 32, 33, 53, 54, 55