



Correlation of

Modern Refrigeration and Air Conditioning, Althouse, Turnquist, Bracciano (Goodheart-Willcox Publisher ©2025)

to

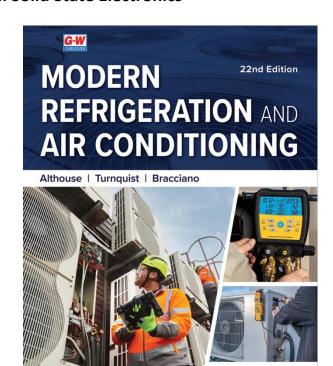
AHRI Curriculum Guide VIII. Solid State Electronics

Goodheart-Willcox is pleased to partner with the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) and the American Council for Construction Education (ACCE) by correlating *Modern*Refrigeration and Air Conditioning to the AHRI Curriculum Guide. The following chart correlates

Modern Refrigeration and Air Conditioning to a section of the Curriculum Guide developed by AHRI used for ACCE (formerly PAHRA) accreditation.

The chart lists the Curriculum Guide's knowledge and task competency objectives in the left column and the corresponding chapter numbers from *Modern Refrigeration and Air Conditioning* in the right column.

For more information on the American Council for Construction Education (ACCE) and related accreditation, please visit: www.acce-hq.org



| VIII.A. Solid State Components | |
|----------------------------------------------------------------------------|---------------------------------|
| Knowledge | Textbook Chapter(s) |
| Explain the function and/or application in HVACR circuits and controls of: | |
| a. amplifiers | Chapter 15 |
| b. bilateral switches | Chapter 15, 17 |
| c. capacitors | Chapters 13, 14, 15, 16, 17, 19 |
| d. diodes | Chapter 15 |
| e. direct digital control/system (DDC/DDS) | Chapters 17, 26 |
| f. effects of heat and moisture | Chapters 15, 16, 17, 24 |

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| VIII.A. Solid State Components (continued) | |
|-------------------------------------------------------------------|-----------------------------|
| Knowledge | Textbook Chapter(s) |
| g. photoelectric cell | Chapters 15, 39 |
| h. rectifiers | Chapter 15 |
| i. resistors | Chapter 13 |
| j. semiconductors | Chapter 15 |
| k. shielded wiring | Chapter 14 |
| l. sensors | Chapter 15 |
| m. silicon controlled rectifiers (SCR) | Chapter 15 |
| n. thermistors | Chapter 15 |
| o. transducers | Chapter 15 |
| p. transistors | Chapter 15 |
| q. triacs | Chapter 15 |
| Explain the role computers are now playing in the HVACR industry. | Chapters 15, 17, 26 |
| Tasks | Textbook Chapter(s) |
| Measure resistive value of various sensors. | Chapters 15, 16, 17 |
| 2. Measure operability of various boards. | Chapters 15, 16, 17 |
| 3. Test electronic air cleaners. | Chapters 15, 17, 19, 29, 31 |