

As the national leader in acute and critical care nursing, we provide a wide array of educational tools and materials for professional development.

Continuing Education Every one of more than 300 CE opportunities on the AACN Online CE Center is FREE to AACN members. Take advantage of online features such as access to your personal transcript record and all your CE certificates.

Comprehensive Bookstore A wide range of textbooks, manuals, handbooks, CE courses, certification review programs and other practice and educational resources is available through the AACN Online Bookstore.

The National Teaching Institute & Critical Care Exposition® NTI is the leading conference for nurses who care for acutely and critically ill patients and includes hundreds of educational sessions, certification review courses and exams, a professional development component for advanced practice nurses, career development opportunities, and exhibits from major health-care companies introducing their latest technologies.

Evidence-Based Practice Alerts The goal of the Practice Alerts is to help nurses and other healthcare professionals carry their bold voices to the bedside and to directly impact patient care. Practice Alerts are succinct, dynamic directives from AACN that are supported by authoritative evidence to ensure excellence in practice and a safe and humane work environment.

E-Learning AACN offers quality, up-to-date, Web-based educational courses that are accessible anytime, self-paced, easy to use, time-efficient and cost-effective. These courses offer many advantages over traditional classroom teaching and allow educators to focus on applied clinical training using a blended learning approach.

“It’s more in-depth [than classroom learning]...and staff members do not have to wait for the next course.”

—Sally Pierce, RN, BSN, CCRN, Clinical Development Mgr. • Topeka, KS

Want to learn more about Basic ECG Interpretation?

For information about product features, pricing and technical requirements, please visit www.aacn.org/e-learning or call us at 800/899-0573.

Other E-Learning courses from AACN

Essentials of Critical Care Orientation A comprehensive introduction to critical care nursing that focuses on the fundamentals and provides a theoretical foundation to care for critically ill patients.

Essentials of Nurse Manager Orientation A comprehensive course for frontline managers, charge nurses, aspiring managers and leadership staff. Developed in partnership with the American Organization of Nurse Executives (AONE), it’s the first course created specifically for nurse managers.

Essentials of Pediatric Critical Care Orientation Provides a foundation of pediatric acute and critical care nursing education and bridges the knowledge gap between what nurses learn in school and what they need to know to work in the pediatric critical care environment. Created by *Child Health Corporation of America* hospital experts.

Promoting Excellence in Palliative & End of Life Care This 3.5 hour course addresses one of the most stressful aspects of nursing practice: dealing with patients and their families at the most difficult times in their lives.

The AACN Preceptor Development Program This 3.5 hour course for nurses working in all patient care areas provides a practical application of theory-based precepting in real-world situations.



A flexible E-Learning module for anyone who works with cardiac patients

AMERICAN ASSOCIATION of CRITICAL-CARE NURSES

Lesson 1: Introduction to ECG Cardiac Anatomy & Physiology

- A. Heart and Circulatory System
- B. Cardiac Chambers
- C. Heart Valve
- D. Circulation
- E. Coronary Artery Circulation
- F. Nerve Function
- G. Muscle Cells
- H. Electrophysiology
- I. Conduction System

Lesson 2: ECG Interpretation Basics

- A. Monitoring Basics
- B. ECG Waveform Components
- C. Cardiac Cycle
- D. Measuring Heart Rates

Lesson 3: Sinus Rhythms

Lesson 4: Atrial Rhythms

Lesson 5: Junctional Rhythms

Lesson 6: Ventricular Rhythms

Lesson 7: Heart Block Rhythms

Self-paced and easy to access

Measuring intervals: PR

PR Interval
 — Identify a P wave and an associated R wave
 — Count the number of boxes between the P wave and the R wave and multiply by .04

ANSWER: 5 small boxes x .04 seconds = .20 seconds
NORMAL PR INTERVAL: .12 to .20 seconds

Conduction System

AV Node (40 - 60) beats per minute

The impulse travels from the SA node down the conduction path to the atrioventricular node or AV node. The AV node is located on the floor of the right atrium near the atrial septum. The atria and ventricles are separated by nonconductive tissue, so all impulses generated in the atria are conducted through the AV node. The AV node is capable of initiating an electrical impulse, but the intrinsic rate is slower than the SA node. The intrinsic rate of the AV node is 40 to 60 beats per minute.

The impulse from the SA node causes the tissue at the AV node to depolarize. Once depolarized, the AV node resets its intrinsic rate. This prevents the AV node from initiating its own impulse and

Conduction System Diagram: Shows the heart with the SA Node, AV Node, Atrial Tissue, and Ventricular Tissue. The AV Node is shown as a red sun-like structure between the atrial and ventricular tissues.

Cost-effective and time-efficient

“...an excellent teaching tool with a great review and reference for anatomy and physiology...”

—Prasama Sangkachand, RN, Unit Based Educator • New Haven, CT

A Comprehensive Web-based Introduction to Basic ECG Interpretation

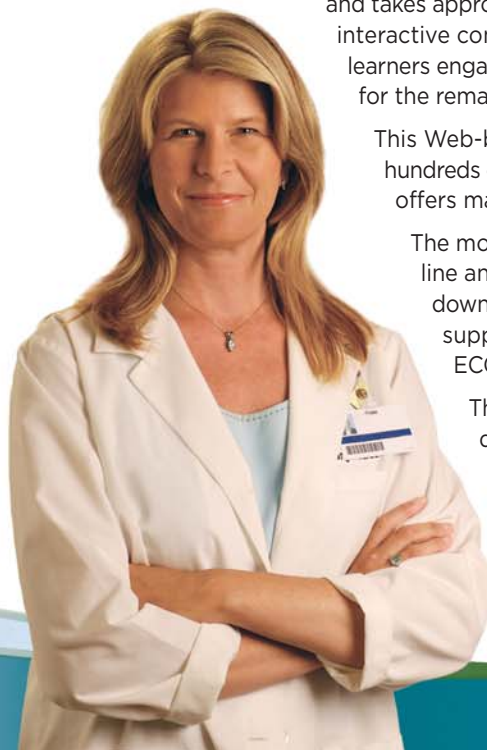
Basic ECG Interpretation uses the same Web-based training as other AACN E-Learning courses and can be used as a stand-alone module or with AACN’s popular *Essentials of Critical Care Orientation*. Ideal for critical care nurses, cardiac technicians or anyone working with cardiac patients, it includes detailed content on cardiac physiology, ECG equipment, lead placement, and the analysis and interpretation of dysrhythmia.

The *Basic ECG Interpretation* module—which includes seven lessons and takes approximately six hours to complete—provides in-depth, interactive content with rich graphics and animation that keeps learners engaged. The first two lessons are used as a foundation for the remaining lessons on dysrhythmia analysis.

This Web-based *Basic ECG Interpretation* module, used by hundreds of hospitals and nursing schools around the country, offers many benefits over traditional classroom teaching.

The module includes a notebook with objectives, an outline and glossary. Online module lessons offer additional downloadable documents for offline reference including supplementary material and practical tips, practice ECG strips, calipers, animations and self-tests.

The module concludes with an assessment that demonstrates subject matter proficiency. The course provides six hours of CNE credit.



Basic ECG Interpretation Web-based benefits include—

Self-paced and easy-to-access.

Learners set their own pace and access course material from any computer with broadband Web access. Material can be revisited for up to one year as needed.

Flexible and adaptable. The entire course takes approximately six hours to complete and can be paced in smaller learning lessons. The modular design lets educators tailor information to specific lesson plans.

Regular updates. Online access ensures that learners receive up-to-date information with regular revisions.

Cost-effective and time-efficient. Online education allows course content to be accessed away from the classroom so educators can incorporate critical thinking and clinical skills into their orientation programs.

Easy-to-use tracking. Scored tests at the end of each module indicate comprehension level and enable learners and educators to pinpoint specific learning needs. AACN’s LearnCenter tracks individual and group progress through the course.

About AACN. Founded in 1969, the American Association of Critical-Care Nurses (AACN) is the largest specialty nursing organization in the world. Our

vision is to create a healthcare system driven by the needs of patients and their families where acute and critical care nurses make their optimal contribution.

ECG Complex

Let's review what is going on electrically in one complete cardiac complex:

- The P wave begins the normal ECG complex and reflects atrial depolarization.
- The PR interval is measured from the beginning of the P wave to the beginning of the QRS complex, and reflects the length of time it takes the electrical impulse to travel from the SA node to the beginning of ventricular depolarization. The normal PR interval is 0.12 to 0.20 seconds.
- The QRS interval is measured from where the complex first leaves the baseline (beginning of the QRS complex) and most intersects the baseline (end of the QRS complex).

ECG Complex Diagram: Shows a standard ECG waveform with labels for P Wave, Q Wave, R Wave, S Wave, and T Wave. Arrows indicate the QT interval and ST segment.