

<b>CEPS Allied Professional Exam Content Outline</b>	
<b>1. Physics of Electrophysiology</b>	<b>5%</b>
1.A. Units and Relationship of Measurement	
1.A.1. Basic quantities	
1.A.2. Derived Quantities	
1.B. Signal Concepts	
1.C. Electronic Circuitry; Filter Settings	
1.D. Biophysics of ablation	
<b>2. Cardiac Anatomy and Physiology</b>	<b>10%</b>
2.A. Cardiac Anatomy	
2.B. Hemodynamics of the Cardiovascular System	
2.C. Anatomy of the Conduction System	
2.D. Electrophysiology of the Conduction System	
2.E. Anatomy and physiology of acquired, inherited and iatrogenic cardiac conditions	
<b>3. Pharmacology</b>	<b>6%</b>
3.A. Types of drugs and their pharmacokinetics in electrophysiology	
3.B. Anticoagulation	
3.C. Intravenous Sedation, Analgesia, and Reversal Agents in the EP Lab	
3.D. Drug and Device Interaction	
3.E. Drug Effects on Cardiac Rhythm and Conduction	
3.F. Electrophysiology specific drug indications/contraindications and side effects	
<b>4. Fundamentals of Electrophysiology</b>	<b>20%</b>
4.A. Normal conduction system properties/intervals	
4.B. Electrophysiology of the Conduction System; Action Potential	
4.C. Abnormalities of the Conduction System	
4.D. Mechanisms of Arrhythmia	
<b>5. Clinical Assessment</b>	<b>8%</b>
5.A. Patient cardiac history	

5.B. Physical Assessment	
5.C. Clinical assessment of arrhythmia	
5.D. Diagnostic Tests, Indications, and Evaluation	
5.D.1. Tilt table testing	
5.D.2. Ambulatory and invasive ECG monitoring	
5.D.3. Stress testing	
5.D.4. Echocardiography: TEE	
5.D.5. Novel noninvasive diagnostic testing	
5.D.6. MRI, CT	
5.D.7. 12 lead ECG/telemetry monitoring	
5.D.8. Response to drugs	
5.D.9. Response to vagal maneuvers	
5.E. Electrocardiography	
5.E.1. Normal Electrocardiogram Recognition	
5.E.2. ECG Recognition of Arrhythmia Type and Mechanism	
5.E.3. ECG localization of ectopic morphologies and pathway locations	
5.E.4. Recognition of Device Paced ECG	
5.F. Inherited Arrhythmia Syndromes, Channelopathies	
5.F.1. Indications of genetic testing	
5.F.2. Provocation testing	
5.G. Initial assessment/Diagnostic Workup	
<b>6. Laboratory Considerations</b>	<b>10%</b>
6.A. Laboratory Supplies, Equipment, Maintenance, Connectology, Troubleshooting	
6.B. Patient Preparation for Procedure	
6.C. Access Techniques, Trans-septal Approach, Epicardial Approach	
6.D. Recording Modalities/Signal Acquisition	
6.E. Risks of Complications	
6.F. Informed Consent/Documentation/Chart Review	
6.G. Infection Control	
6.H. Sterile Technique	
6.I. Radiation Physics/Safety	

6.J. Electrical Safety	
6.K. Drug interaction	
6.L. Device Interaction	
6.M. Management of Complications and Emergencies	
<b>7. Invasive Electrophysiology</b>	<b>30%</b>
7.A. Indications, Contraindications for EP study	
7.B. Baseline Assessment, Calculations, Interval Measurements	
7.C. Methods of Recording and Evaluation	
7.C.1. Intracardiac recording and recognition	
7.C.2. Assessment of conduction system	
7.C.3. Determination of refractory periods	
7.D. Differential Diagnostic Pacing	
7.E. Surface ECG Morphology During Intracardiac Pacing	
7.F. Evaluation of Arrhythmia	
7.F.1. Narrow complex supraventricular tachycardia	
7.F.2. Wide complex supra/ventricular tachycardia	
7.F.3. Response to programmed stimulation	
7.F.4. Response to drugs	
7.F.5. Differentiation of arrhythmia mechanisms	
7.G. Emergency management	
7.H. Left atrial appendage occlusion or closure	
7.I. Biophysics of ablation	
7.J. Ablation strategies (e.g., anatomical locations/desirable signals)	
7.K. Autonomic modulation therapies	
7.L. Surgical Therapy (e.g., structural heart, MAZE)	
7.M. Electroanatomical/3D mapping	
7.N. Novel Mapping Technologies	
7.O. Pediatric considerations	
<b>8. Implantable Devices (Pacemaker, ICD, CRT, Loop Recorder)</b>	<b>5%</b>
8.A. Pacemaker Modes, Basic Timing Cycles, and algorithms	
8.B. Implanted Devices Therapy, Programming, and Interpretation	

8.C. Indications for Implantation of Devices	
8.D. Implant Troubleshooting	
8.E. Recognition of Device Problems:EMI, Sensing, Capture, Inappropriate Therapy, Implantation Techniques, MRI, Remote Monitoring	
<b>9. Real-time and Diagnostic Imaging (TTE, TEE, Fluoroscopy, ICE, Chest X-Ray)</b>	<b>5%</b>
9.A. Interpretation: Implanted Devices	
9.B. Interpretation: Clinical Symptoms/Diagnosis	
9.C. Interpretation: Catheter Positions	
9.D. Interpretation of abnormal structures or motion	
<b>10. Research Methodology &amp; Interpretation</b>	<b>1%</b>
10.A. Clinical trial methodology/statistical analysis	
10.B. Major clinical study results	