CONTENT OF INDUSTRIES TRAINING PROGRAMMES VERSUS INTERVENTIONAL CARDIOLOGY CORE SYLLABUS
Version 1.0 - April 2008

Crosses in the table mean that the training programmes offered by the institutions cover the specific field of the Interventional Cardiology Core Syllabus.

		CROSSROADS INSTITUTE	ACADEMIA	INSTITUTE OF THERAPY ADVANCEMENT	The Cordis Cardiac and Cardiovscular Institute (CCVI)
PROCEDURAL TECHNIQUES					
a.	**Vascular access** including principles of femoral, radial, and brachial procedures, closure techniques, detection and treatment of complications.	X	X	X	X
b.	**Appropriate catheter selection** to achieve optimal opacification and support.	X	X	X	X
c.	**Selection of optimal projections** for lesion visualisation and treatment.	X	X		X
d.	**Knowledge of angioplasty material** and proper selection of guidewires, balloon catheters, and stents.	X	X	X	X
e.	K**nowledge of types and characteristics of bare metal and drug eluting stents** including post-implantation pharmacological treatment and their risk of thrombosis and restenosis.	X	X	X	X
f.	**Classification, mechanisms, and therapy of in-stent restenosis.**	X	X	X	X
g.	**Knowledge of ancillary interventional techniques,** including • Therapeutic: anti-embolic protection with filters and occlusive balloons, rotablator, laser, atherectomy and thrombectomy devices. • Diagnostic: intravascular ultrasound, Doppler and intracoronary pressure measurement	X	X	X	X
h.	**Indications for mitral, aortic, and pulmonary valvuloplasty** in management of valvular disorders, including factors that differentiate patients who require surgical commissurotomy or valve repair or replacement.				
i.	**Indication for catheter-based interventions** in management of congenital heart disease in adults, such as closure of intracardiac defects (ASD, PFO, VSD, PDA).				
j.	**Indications for septal alcoholisation** in obstructive hypertrophic cardiomyopathy				
INDICATIONS FOR TREATMENT AND PATIENTS SELECTION					
a.	**Indications for elective cardiac catheterisation and related catheter-based interventions** in management of ischaemic and valvular heart disease, in accordance with the ESC guidelines and evidence based medicine.	X		X	
b.	**Indications for urgent catheterisation** and management of acute myocardial infarction, including differentiation between patients who require primary or rescue angioplasty, coronary bypass surgery or conservative treatment.	X	X	X	X
c.	**Indications for mechanical support devices in the management of haemodynamically compromised patients** (intra-aortic balloon pump etc.)	X	X	X	
d.	**Present indications for surgical re-vascularisation in coronary artery disease**	X	X	X	
BASIC SCIENCE					
a.	**Anatomy and physiology** : cardiac, vascular and coronary artery anatomy, including anatomical variants and frequent congenital abnormalities; basic circulatory physiology, myocardial blood flow regulation, myocardial physiology and metabolism.	X			
b.	**Vascular biology**, including the processes of vasoreactivity, plaque formation, vascular injury and healing, restenosis, SVG atherosclerosis, cardiac allograph vasculopathy.	X			
c.	**Function of progenitor cells** and their possible role in angiogenesis and myogenesis.				
d.	**Haematology**, including platelet function and aggregation, clotting cascade, and fibrinolysis.	X			
e.	**Coronary anatomy and physiology**, including : * Classification of coronary segments and lesion characteristics; * Assessment of lesion severity, intracoronary pressure and flow velocity measurement, fractional flow reserve (FFR); * Assessment of collateral circulation.	X	X		X
PHARMACOLOGY					
a.	Biologic effects and appropriate use of vasoactive drugs, antiplatelet agents, thrombolytics, anticoagulants, antiarrhythmics, inotropic agents, and sedatives	X			
b.	Biologic effects and appropriate use of angiographic contrast agents, including prevention of renal dysfunction and allergic reactions.	X			
c.	Atherosclerosis prevention in PCI candidates focusing on optimal care of hypertension, dyslipidemia, diabetes and smoking cessation.	X	X	X	

IMAGING

a.	**Radiation physics, radiation risks and injury, and radiation safety,** including glossary of radiological terms, methods to control radiation exposure for patients, physicians, and technicians.	X	X		
b.	Specific imaging techniques in interventional cardiology, such as quantitative angiography and intravascular ultrasonography.	X	X	X	X
C.	**Principles of cardiac computed tomography**, potential role for non-invasive coronary imaging.	X	X		
d.	**Digital archiving and tele-communication** of angiographic images				

MANAGEMENT OF COMPLICATIONS OF PERCUTANEOUS INTERVENTIONS

a.	Mechanical complications, such as coronary dissection, spasm, perforation, “slow/ no reflow”, cardiogenic shock, left main trunk dissection, cardiac tamponade including pericardiocentesis, peripheral vessel occlusion, and retained components.	X	X		X
b.	Thrombotic and haemorrhagic complications associated with percutaneous intervention or drugs.	X	X		X

MISCELLANEOUS

a.	Peripheral angiography and angioplasty including essential radiological anatomy, indications and principles of carotid, subclavian, renal and iliac stenting.	X			X
b.	Ethical issues and risks associated with diagnostic and therapeutic techniques.	X			
c.	Statistics, epidemiologic data, and economic issues related to interventional procedures.	X	X		