The Cardiovascular System in Health and Disease: 
Fundamental Concepts for the Medical Device Industry

June 9-12, 2009  ▶  Stanford University Campus

Registration and Pricing

Individuals  ▶  $3,200
Early Registration  ▶  $2,880
Group pricing is available by contacting Robert Katayama  ▶  650.721.1056, robert.katayama@stanford.edu

Credit Options

Continuing Education Units (CEUs) from Stanford University are available with a $75 processing fee.

Delivered by the Stanford Center for Professional Development

The Stanford Center for Professional Development connects working professionals worldwide to the research and teaching of Stanford University faculty in the School of Engineering and related academic departments. Qualified individuals may study for master of science degrees on a part-time basis, pursue graduate certificates and professional certificates, take individual graduate courses and professional courses, participate in workshops, view free online seminars and more. Courses are delivered online, on the Stanford campus in the heart of Silicon Valley, and at the worksite.
scpd.stanford.edu

More Information
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Stanford, CA  94305-4008

"Bringing together clinical applicability, development processes and the changes we are seeing in imaging and drug device combinations was exceptional."
—Michael Van Zandt
Director of Global Marketing
Medtronic

Design new and improved medical devices through a better understanding of the cardiovascular system

Register by May 1 and Save!
A one-of-a-kind experience

Stanford University offers a unique program specifically for professionals in the medical device industry who need to learn the biology, anatomy, and physiology of the cardiovascular system in order to successfully design, develop, and market minimally-invasive medical devices. The program is the only one of its kind to teach a combination of engineering and medical principles in an intensive, interactive format.

Learn from the experts

The program is taught by world-renowned Stanford faculty who are pioneers in the field of cardiovascular surgery and devices. Participants will benefit from the chance to speak directly with the surgeons who use medical devices in their procedures and will gain a better understanding of how devices may be designed to meet the needs of physicians and their patients.

Explore in hands-on laboratories

Taught through hands-on laboratories, case studies, and computer modeling technology, participants will explore the impact of cardiovascular system on medical device design and development. Taught through hands-on laboratories, case studies, and computer modeling technology, participants will explore the impact of the cardiovascular system on medical device design and development.

Program Outline

**Lecture Sessions**

- **Tuesday, June 9**
  - Cardiovascular Anatomy
  - Blood and Blood Vessels
  - Cardiovascular Molecular and Cell Biology
  - Hemostasis and Thrombosis
- **Wednesday, June 10**
  - Cardiovascular Physiology
  - Cardiovascular Pathophysiology and Epidemiology
  - Noninvasive Cardiovascular Imaging
- **Thursday, June 11**
  - Noninvasive Cardiovascular Imaging (cont’d)
  - Cardiac Rhythm Disorders and Treatments
  - Peripheral Vascular Disease
  - Renovascular Disease
- **Friday, June 12**
  - Congenital Cardiovascular Disease
  - Coronary Artery Disease
  - New Technologies for Treating Cardiovascular Disease

**Laboratory Sessions**

- **Benchtop Experimental Methods**
  - Explore fundamental fluid measurement techniques applicable in vivo and in vitro using anatomic replicas.
  - Discover how ultrasound, magnetic resonance imaging (MRI), and computed tomography (CT) techniques can be used to acquire anatomic and physiologic data for diagnoses, patient follow-up, and device design.

- **Computer Modeling Methods and Applications**
  - Learn molecular biological techniques including cell culture, northern and western blotting, RT-PCR, and gene expression profiling using cDNA microarrays. Understand the effect of biomechanical forces on endothelial and smooth muscle cells.

Who Should Attend

- Engineers
- Product developers
- Product marketing managers
- Venture capitalists

You Will Learn

- To apply cardiovascular biology, anatomy, physiology and bioengineering principles directly to device design and development
- To integrate current imaging and modeling technology into the design and development process
- To incorporate physicians’ needs in all phases of product development and marketing

For more information

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