HMX Pro Pharmacology - Drug Delivery

The range of systems and approaches that can be used to deliver therapeutics is growing and advancing at an incredible rate, so learning about the advances in drug delivery has important implications for anyone working in health care and related sectors. This course offers a unique way for professionals to learn from leading Harvard Medical School faculty about cutting-edge drug delivery systems and approaches that can be used in the treatment and prevention of disease.

Participants will:

- Learn about drug delivery systems and approaches to drug delivery
- Learn about materials and technologies that are used in drug delivery
- Get an inside look at some novel and emerging drug delivery systems and technologies
- Learn how improved drug delivery can lead to better health care and patient experience and outcomes

Topics Covered

Overview of Drug Delivery
- What is Drug Delivery?
- The Promise of Drug Delivery

Drug Delivery Systems
- Overview of Drug Delivery Systems
- Local Administration for Systemic Effect
- Local Administration for Local Effect
- Systemic Administration for Systemic Effect
- Systemic Administration for Local Effect
- Clinical Linkage: Closed Loop Systems

Selected Approaches to Drug Delivery
- Overview of Drug Delivery Approaches
- Enhancing Permeation
- Modifying Drugs by Attachment to Polymers
- Manipulating Existing Drug Transport Mechanisms
- Utilizing Vectors to Deliver Drugs
- Remote Triggering
- Clinical Linkage: Recent Advances in Drug Delivery Systems

Materials and Systems
- Overview of Materials and Systems
- Polymeric Materials
- Non-polymeric Materials
- Triggerable Materials
- Microparticles vs. Nanoparticles
- Hydrogels
- Biocompatibility
- Clinical Linkage: Developing New Drug Delivery Systems

Wrap-up
- The Future of Drug Delivery

The HMX Pro Series offers a new online learning experience designed to get busy professionals up to speed on the latest advances in medicine. Concepts are taught using whiteboard-style videos and animations and reinforced by interactive elements, true-to-life scenarios, and real patient cases to enhance learning.

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