

Course Catalog

Complete overview of the
CMR Institute curriculum



Advancing knowledge. Enhancing healthcare.®





CMR Institute

4423 Pheasant Ridge Road

Suite 100

Roanoke, VA 24014

Phone: 800.328.2615

Fax: 540.989.4720

Web: www.cmrinstitute.org

Email: program@cmrinstitute.org

NON-DISCRIMINATION POLICY

The Certified Medical Representatives Institute admits students of any race, religion, color, and national or ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to students. The Institute does not discriminate on the basis of race, religion, sex, color, or national or ethnic origin in administration of its educational policies, admission policies, or other programs administered by the Institute.

Who Should Take This Course

Sales representatives, managers, and others who interact with dietitians, diabetes educators, oncologists, primary care physicians, obstetricians, specialists in geriatric medicine, and other healthcare providers who pay particular attention to the nutritional status of their patients, and those who are interested in learning more about nutrition and its role in health and disease.

Career Application/Benefits

Despite the increasing wealth of nutritional information, there are still many conflicting theories concerning the connections between nutrition, health, and disease. Nevertheless, the link between nutrition and disease is well established. As a result, the role of good nutrition in preventing many chronic diseases is recognized in medicine. While physicians have traditionally focused almost exclusively on curing diseases, today they, along with other healthcare professionals, are trying to find ways to prevent diseases through proper nutrition. Also, it is increasingly clear that nutritional support is vital in the optimal care of many seriously ill patients. In diseases such as cancer and AIDS, and in patients who have suffered traumatic injury, an emphasis on excellent nutrition and nutritional supplementation may make an enormous difference in length and quality of life. This course will benefit healthcare representatives and others by providing them with a strong background in the science of nutrition. Given the increasing impact of nutrition in medicine, it is vital to have a comprehensive knowledge of this important subject. With this knowledge, they will be able to better discuss any nutritional issues that may arise in the course of their interactions with healthcare professionals.

Course Description

This course describes the role of nutrition in maintaining good health and in providing supportive therapy for patients with specific diseases. It provides information about nutrients and nutritional standards. The course also describes the components of a healthy diet and lifestyle, including the role of exercise and weight control. In addition, it discusses malnutrition and the related disorders anorexia nervosa and bulimia and describes the specific dietary risks linked to diseases such as diabetes, cardiovascular disease, cancer, and osteoporosis. Finally, this course describes the role of nutrition in the treatment of seriously ill patients, such as those with traumatic injuries, cancer, and AIDS, and it discusses the role of nutritional support with enteral and parenteral nutrition.

Related Courses

- Diabetes: Approaches in Disease Management
- Oncology: Treatment and Management
- Cardiovascular System
- Digestive System
- Focus on Women's Health

| CHAPTER | CONTENT |
|---------|---|
| 1 | <p>NUTRIENTS AND NUTRITIONAL STANDARDS</p> <p>Functions of Nutrients in the Body Nutrient Standards and Food Guides Nutritional Requirements for Each Stage in Life</p> |
| 2 | <p>HEALTHY DIET AND LIFESTYLE</p> <p>The Elements of a Healthy Diet Dietary Components that Should be Limited Obesity, Exercise and Weight Control</p> |
| 3 | <p>NUTRITION AND DISEASE</p> <p>Diseases of Malnutrition Cardiovascular Disease and Diabetes Cancer Risk Osteoporosis Gastrointestinal and Liver Diseases Migraine Headaches</p> |
| 4 | <p>THE ROLE OF NUTRITION IN SEVERELY ILL PATIENTS</p> <p>Enteral and Parenteral Nutrition Trauma Patients with Cancer Patients with AIDS</p> |

Learning Objectives

Upon successful completion of this course, the student will be able to discuss the role of nutrition in maintaining good health and in providing supportive therapy for patients with specific diseases, provide information about nutrients and nutritional standards, describe a healthy diet and lifestyle and the role of weight control, and discuss dietary risks linked to diseases and the role of enteral and parenteral nutrition in the treatment of seriously ill patients.

Nutrition: Wellness and Disease

DSM - 421
3 CREDITS

Program(s): CMR

COURSE CONSULTANTS

THIRD EDITION:

Jeffrey L. Barnett, MD

Adjunct Professor,
Division of Gastroenterology
University of Michigan
Medical Center
Ann Arbor, Michigan

Kathleen M. Strausburg, MS, RPh

Board Certified Nutrition
Support Pharmacist
Nutrition Support/Pharmacy
Consultant
Lakewood, Colorado

FOURTH EDITION:

Jeffrey L. Barnett, MD

Huron Gastroenterology Associates
Adjunct Professor, Division of
Gastroenterology
University of Michigan Medical
Center
Ann Arbor, Michigan

Kathleen M. Strausburg, MS, RPh

Nutrition Support/Pharmacy
Consultant
Denver, Colorado

Graduate Supplement

DSM - 5421

To earn graduate-level credit, this supplement and course DSM-421 must be successfully completed.

See page 8 for more information about graduate-level credit.

Introduction to Pharmacology

SCI - 302
4 CREDITS

Program(s): CMR

COURSE CONSULTANTS

SEVENTH AND EIGHTH EDITIONS:

J. Russell May, PharmD, FASHP

Clinical Professor
Department of Clinical and Administrative Pharmacy
University of Georgia
College of Pharmacy
Augusta, Georgia

Dianne B. Williams, PharmD, BCPS

Drug Information and Formulary Coordinator
MCG Health System
Assistant Clinical Professor
University of Georgia
College of Pharmacy
Augusta, Georgia

Who Should Take This Course

Sales representatives, managers, and others who are interested in obtaining a basic knowledge of pharmacology and its applications.

Career Application/Benefits

Those who prescribe, dispense, or administer drugs and those who provide supportive care for patients taking medications need to know how drugs act on the body and interact with each other. These professionals must weigh the therapeutic benefit of a drug against potential risks, such as adverse effects and drug interactions. As the number of medications continues to rise, the need for a strong foundation in pharmacology becomes even more important to every member of the healthcare community. This course will benefit those working for pharmaceutical companies and in other areas of the healthcare environment. Information provided in this course will allow sales representatives and others to communicate effectively and knowledgeably with customers and clinicians regarding drugs and their effects. In addition, representatives and others who take this course will gain an understanding of the various factors that physicians consider when prescribing a new drug.

Course Description

This course is one of four foundation courses required by CMR Institute for certification. It describes the basic principles of drug actions and interactions, including pharmacokinetics, factors that modify the drug response, and adverse reactions. The course also provides an overview of the therapeutic classes of drugs, along with general definitions of the subclasses used to treat disorders of every body system.

Related Courses

- Human Body, Pathology, and Treatment
- Contemporary Pharmacoeconomics
- Impact of Drug Resistance on Antibiotic Therapy
- Nutrition: Wellness and Disease
- All body system courses

| CHAPTER | CONTENT |
|---|--|
| 1 BASIC PRINCIPLES OF DRUG ACTIONS AND INTERACTIONS | <p>Basic Principles of Drug Actions</p> <ul style="list-style-type: none"> • Action versus Effect • Local versus Systemic Action/Direct versus Indirect Effect • Cellular Response to Drugs • Mechanism of Action: How Drugs Do What They Do <p>Pharmacokinetics</p> <ul style="list-style-type: none"> • Absorption • Distribution • Metabolism • Elimination <p>Drug Response</p> <p>Basic Principles of Drug Interactions</p> |
| 2 THERAPEUTIC CLASSES | <p>Anti-inflammatory Drugs</p> <p>Cardiovascular Drugs</p> <p>Central Nervous System (CNS) Drugs</p> <p>Dermatologic Drugs (Topicals)</p> <p>Autonomic Nervous System (ANS) Pharmacology</p> <p>Antihistamines</p> <p>Hormones</p> <p>Gastrointestinal Drugs</p> <p>Miscellaneous Classes and Agents</p> <p>Nutrients and Nutritional Drugs</p> <p>Anti-infective Drugs</p> <p>Antibacterial Agents</p> <p>Antifungal Agents</p> <p>Antineoplastic Drugs</p> |

Learning Objectives

Upon successful completion of this course, the student will be able to describe basic principles of drug actions and interactions, including adverse reactions and factors modifying response; describe actions of drugs by therapeutic classes; and discuss the techniques by which drugs are administered to treat diseases.

Human Body, Pathology, and Treatment

SCI - 301
4 CREDITS

Program(s): CMR

COURSE CONSULTANTS

EIGHTH AND NINTH EDITIONS:

Jeffrey L. Barnett, MD

Adjunct Professor of Internal Medicine
Huron Gastroenterology Associates
University of Michigan
Medical Center
Ann Arbor, Michigan

Karen J. Tietze, PharmD

Professor of Clinical Pharmacy
Department of Pharmacy Practice and Pharmacy Administration
University of the Sciences in Philadelphia
Philadelphia, Pennsylvania

Who Should Take This Course

- Sales representatives and managers who interact with healthcare professionals, including physicians, pharmacists, nurse practitioners, physician assistants, nurses, dietitians, physical and occupational therapists, respiratory therapists, psychologists, and hospital staff.
- Those who need general information on the systems of the body, their dysfunctions, and forms of treatment.

Career Application/Benefits

Because illness is seldom limited to one body system or necessarily to a single disease, health professionals often take a broad approach. The risks, costs, and other concerns for the patient are just a few of the factors clinicians must consider when prescribing new drugs, treatments, and tests. The information provided in this course will help representatives and others to understand the problem-solving challenges faced by clinicians. In addition, representatives and others who take this course will become familiar with basic medical information that will allow effective communication with customers and clinicians.

Course Description

This course is one of four foundation courses required by CMR Institute for certification. It describes relationships and interactions between systems of the body and their functions, components, dysfunctions, and forms of treatment. The course also defines basic medical terminology.

Related Courses

- Introduction to Pharmacology
- Disease Management
- The Evolving Healthcare Community
- All body system courses

| CHAPTER | CONTENT |
|---|---|
| 1 THE HEALTH PROFESSIONAL'S PERSPECTIVE | Objectives and Concerns of the Health Professional Evaluation of Disease Systems of the Body Divisions of the Body Introduction to Medical Terminology |
| 2 INTRODUCTION TO PATHOLOGY | The Health Professional's Approach to Pathology Basic Body Chemistry Cells: Their Structures and Functions Tissues Body Defenses |
| 3 CATEGORIES OF PATHOLOGY | Inflammation and Injury Infection Neoplasia Genetic Disorders |
| 4 DIAGNOSTIC TESTS AND TREATMENT APPROACHES | Diagnostic Tests Pharmacologic Treatment Approaches Nonpharmacologic Treatment Approaches Treatment Selection and Regimens |

Learning Objectives

Upon successful completion of this course, the student will be able to describe basic anatomy and physiology of the human body, including body systems and functions; describe, in general terms, approaches to disease prevention and treatment; and correctly use basic medical terminology in discussions of body systems and pathology.

Who Should Take This Course

Sales representatives, managers, and others who would benefit from a knowledge of formularies and how they influence the drug utilization decisions of healthcare administrators, physicians, and pharmacists.

Career Application/Benefits

Formularies are important tools used by healthcare organizations to guide rational drug use and efficiently control pharmacy costs. In addition to hospitals, many managed care organizations, government programs such as Medicare and Medicaid, and some health insurance companies, have developed formularies that influence which drugs are prescribed by providers and used by subscribers. This extensive use of formularies to manage and organize drug use both for inpatients and outpatients is redefining the role of healthcare representatives as well as the roles of physicians, pharmacists, and other healthcare professionals. This course will benefit healthcare representatives and others who need to be aware of the specific trends and issues that govern the formulary in different healthcare organizations. The information in this course describes the formulary system, which has a significant impact on physician prescribing decisions and how representatives and others conduct their sales activities.

Course Description

This course discusses significant developments in the formulary process and pharmacy benefit management, particularly in terms of managed healthcare organizations. It provides an overview of the healthcare institutions that use formularies, the types of formularies that are in place, and the role of the Pharmacy and Therapeutics (P&T) Committee in product approval to the formulary. The course also discusses strategies for managing the pharmacy benefit, including formularies, generic substitution, therapeutic interchange, drug utilization review, clinical practice guidelines, and outcomes research. It concludes by discussing trends among pharmacy benefit management companies (PBMs) and pharmaceutical companies, and the role of healthcare representatives in the formulary decision-making process.

Related Courses

- The Managed Healthcare Market
- Contemporary Pharmacoeconomics
- The Value of Pharmaceuticals

CHAPTER CONTENT

| CHAPTER | CONTENT |
|---|---|
| 1 OVERVIEW OF THE FORMULARY SYSTEM | <p>The Formulary</p> <ul style="list-style-type: none"> • Rationale for the Formulary • The Hospital Formulary • The Managed Healthcare Formulary • Medicare, Medicaid, and Insurance Formularies • Differences in Hospital and Ambulatory/Outpatient Formularies <p>Open and Closed Formularies</p> <ul style="list-style-type: none"> • Formulary Trends <p>The Pharmacy and Therapeutics Committee</p> <ul style="list-style-type: none"> • Structure of the Pharmacy and Therapeutics Committee • Functions of the Pharmacy and Therapeutics Committee • Formulary Approval Process <p>Criteria for Product Approval to the Formulary</p> <ul style="list-style-type: none"> • Formulary Criteria • Tools in the Formulary Decision-Making Process |
| 2 MANAGING THE PHARMACY BENEFIT | <p>Strategies for Managing the Pharmacy Benefit</p> <ul style="list-style-type: none"> • Restrictive Formularies • Prior Authorization • Generic Substitution and Therapeutic Interchange • Drug Utilization Evaluation (DUE) • Clinical Practice Guidelines <p>Role of Physicians and Pharmacists</p> <ul style="list-style-type: none"> • Role of Physicians • Role of the Pharmacist in Managing the Pharmacy Benefit <p>Administering the Pharmacy Benefit</p> <ul style="list-style-type: none"> • Role of Prescription Medicines in Healthcare Delivery • Pharmacy Benefit Design • Pharmacy Benefit Management Companies • Financial Risk Management of the Pharmacy Benefit |
| 3 ROLE OF THE HEALTHCARE REPRESENTATIVE | <p>Trends Among Pharmaceutical Companies</p> <ul style="list-style-type: none"> • Influence of Buying Groups and Negotiated Contracts • National Accounts/Managed Care Departments • Pharmacoeconomics and Outcomes Research Departments <p>Healthcare Representatives and the Formulary</p> <ul style="list-style-type: none"> • Learning About the Formulary • Heeding Restrictions on Access to Physicians and Other Healthcare Professionals • Developing Product Advocates • Providing Required Information and Resources • Maintaining Formulary Approval • Successful Selling Without Formulary Status |

Learning Objectives

Upon successful completion of this course, the student will be able to describe and differentiate the various types of formularies used within healthcare organizations; discuss the role of the Pharmacy and Therapeutics Committee in formulary development; describe strategies used by healthcare organizations to manage the pharmacy benefit; discuss trends among pharmaceutical companies; and describe the role of healthcare representatives in the formulary decision-making process.

The Formulary Process— Managing the Pharmacy Benefit

BUS - 403
3 CREDITS

Program(s): CMR

COURSE CONSULTANTS

SECOND AND THIRD
EDITIONS:

Norman V. Carroll, PhD

Professor of Pharmacy
Administration
Department of Pharmacy
Medical College of Virginia
Virginia Commonwealth University
Richmond, Virginia

David A. Sclar, BPharm, PhD

Professor of Health Policy
and Administration
Director, Pharmacoeconomics
and Pharmacoepidemiology
Research Unit
College of Pharmacy
Washington State University
Pullman, Washington

Graduate Supplement

BUS - 5403

To earn graduate-level credit, this supplement and course BUS-403 must be successfully completed.

See page 8 for more information about graduate-level credit.

Who Should Take This Course

Sales representatives and managers who interact with healthcare practitioners, including physicians, anesthetists, nurses and nurse practitioners, pharmacists, social workers, psychologists and psychiatrists, and physical, occupational, and other therapists, and those with an interest in the comprehensive management of pain.

Career Application/Benefits

Pain is the most common symptom prompting people to seek medical care and is the second leading cause of medically related absence from work. Chronic pain conditions represent a major source of disability and healthcare expense. Many agencies have established pain management guidelines for conditions such as acute low back pain, cancer, arthritis, sickle cell disease, and pain in elderly patients. Several effective options exist for the management of pain, and many authorities now recommend an interdisciplinary team approach to pain management. Pharmaceutical companies have an opportunity to make physicians and others on pain management teams aware of available options and new products for alleviating pain. This course will benefit those in pharmaceutical companies that develop and market such products. For healthcare representatives and others with an interest in pain management, an awareness of pain management guidelines and their rationale will be critical to understanding the way clinicians seek to manage their patients' pain and the various treatment alternatives available to them.

Course Description

This course begins with a discussion of the anatomy and physiology of pain, the different types of pain and their classification, and methods used to assess pain in particular groups of patients. Next, the course reviews guidelines for pain management, including appropriate use of pharmacologic therapies such as opioids, nonopioid analgesics and adjuvants, and nonpharmacologic therapies. The course then discusses team approaches to pain management, pain management for terminally ill patients, the emergence of pain management centers, and pain management programs.

Related Courses

- Musculoskeletal System
- Disease Management
- Long-Term Care
- Introduction to Pharmacology
- Oncology: Treatment and Management

| CHAPTER | CONTENT |
|---------|---|
| 1 | OVERVIEW OF PAIN Anatomy and Physiology of Pain Classification of Pain Assessment of Pain |
| 2 | PAIN MANAGEMENT OPTIONS Pain Management Guidelines Pharmacologic Therapy: Nonopioid Analgesic Agents Pharmacologic Therapy: Opioid Analgesic Agents Pharmacologic Therapy: Adjuvant Analgesic Agents and Other Options Nonpharmacologic Therapy |
| 3 | PAIN MANAGEMENT PROGRAMS Team Approaches to Pain Management Palliative Care Types of Pain Management Programs Pain Management Programs in Managed Care Organizations |

Learning Objectives

Upon successful completion of this course, the student will be able to discuss the anatomy and physiology of pain, classification of pain, and tools used in the assessment of pain; discuss guidelines for pain management, and available pharmacologic and nonpharmacologic therapies for pain control; and discuss various pain management programs now available.

Focus on Pain Management

DSM - 4 2 2
3 CREDITS

Program(s): CMR

COURSE CONSULTANTS

THIRD AND FOURTH EDITIONS:

Michael Ashburn, MD, MPH
Vice President for Clinical and Regulatory Affairs
ZARS, Inc
Salt Lake City, Utah

Arthur G. Lipman, PharmD
Professor of Pharmacotherapy,
College of Pharmacy
Adjunct Professor of Anesthesiology,
School of Medicine
Director of Clinical Pharmacology,
Pain Management Center
University of Utah Health Sciences Center
Editor, *Journal of Pain & Palliative Care Pharmacotherapy*
Salt Lake City, Utah

Graduate Supplement

DSM - 5 4 2 2

To earn graduate-level credit, this supplement and course DSM-422 must be successfully completed.

See page 8 for more information about graduate-level credit.

Who Should Take This Course

Sales representatives, managers, and others who interact with a wide variety of healthcare professionals, including physicians, pharmacists, and nurses, and are interested in learning how the U.S. healthcare community has changed during the last century and how it continues to evolve in the era of managed care.

Career Application/Benefits

The U.S. healthcare community has been profoundly affected by the changes brought by the cost-containment revolution and the influence of managed care. Traditional relationships among independent physicians, employer-funded insurance plans, and the Medicare/Medicaid safety net have given way to managed care organizations and integrated delivery systems, where there is greater emphasis on evidence-based medicine and cost-effective care. Pharmaceutical companies continue to develop and market products and services that meet the changing needs of today's healthcare community. By orienting individuals to the pressures and constraints of today's healthcare environment, this course will help healthcare representatives to work more effectively within their local communities. The information provided in this course will help representatives to become familiar with other members of the healthcare community, including their educational backgrounds, their daily responsibilities, and practice environment. By learning who is paying for healthcare and where the healthcare dollar is being allocated, representatives will have a better understanding of the prescribing pressures faced by physicians and how to present their products and services to best meet the unique needs of each provider.

Course Description

This course describes health insurance plans, managed care organizations, and healthcare financing, including how healthcare services are funded by the government, employers, and individual consumers. It also describes the professions represented in healthcare, with particular emphasis on physicians. The course discusses how healthcare delivery systems are organizing themselves to provide a continuum of care. Finally, it highlights current trends within the pharmaceutical industry, including company mergers and collaborations, value-added programs, and national account management teams.

Related Courses

- The Managed Healthcare Market
- The Pharmaceutical Industry
- Contemporary Pharmacoeconomics
- The 21st Century Physician

| CHAPTER | CONTENT |
|---------|--|
| 1 | <p>OVERVIEW OF THE UNITED STATES HEALTHCARE SYSTEM</p> <p>Health Insurance Plans and Healthcare Financing Employers and Individual Consumers Current Trends</p> |
| 2 | <p>THE ROLES OF HEALTHCARE PROVIDERS</p> <p>Physicians Physician Assistants Nurses Pharmacists Other Members of the Healthcare Team</p> |
| 3 | <p>THE HEALTHCARE CONTINUUM</p> <p>Patient-Centered Care Changing Roles of Hospitals Alternate Healthcare Settings</p> |
| 4 | <p>THE PHARMACEUTICAL INDUSTRY AND THE HEALTHCARE COMMUNITY</p> <p>Strategies to Meet the Customers' Needs The Role of the Healthcare Representative</p> |

Learning Objectives

Upon successful completion of this course, the student will be able to describe the U.S. healthcare system and how healthcare services are funded, including commercial insurers, managed care organizations, Blue Cross and Blue Shield, the government, employers, and employees; discuss the changing role of healthcare providers, including physicians, physician assistants, nurses, pharmacists, and other members of the healthcare team; describe the changing roles of hospitals and the increased use of alternate care settings; discuss current trends within the pharmaceutical industry, including mergers and alliances with PBMs; describe industry strategies used to approach managed care organizations and government programs; and examine the role of the healthcare representative as consultant, educator, and team player.

The Evolving Healthcare Community

BUS - 402
3 CREDITS

Program(s): CMR

COURSE CONSULTANTS

THIRD EDITION:

Thomas P. Reinders, PharmD
Associate Dean of Students
Virginia Commonwealth University
Richmond, Virginia

Kevin A. Schulman, MD, MBA
Director, Center for Clinical
and Genetic Economics
Duke University
School of Medicine
Durham, North Carolina

FOURTH EDITION:

Kevin A. Schulman, MD, MBA
Director, Center for Clinical
and Genetic Economics
Duke University
School of Medicine
Durham, North Carolina

James Howell, MD, MPH
Chair, Department of Rural Medicine
Professor of Public Health
Nova Southeastern University
Fort Lauderdale, Florida

Graduate Supplement

BUS - 5402

To earn graduate-level credit, this supplement and course BUS-402 must be successfully completed.

See page 8 for more information about graduate-level credit.

Endocrine System

SCI - 426
3 CREDITS

Program(s): CMR

COURSE CONSULTANTS

FIFTH AND SIXTH EDITIONS:

Mark E. Molitch, MD

Division of Endocrinology,
Metabolism and Molecular Medicine
Professor of Medicine
Northwestern University Feinberg
School of Medicine
Chicago, Illinois

John White, PharmD, PA-C

Professor and Vice-Chairman of
Research
Department of Pharmacotherapy
Washington State University-Spokane
Spokane, Washington

SEVENTH EDITION:

Mark E. Molitch, MD

Professor of Medicine
Northwestern University Feinberg
School of Medicine
Division of Endocrinology,
Metabolism, and Molecular Medicine
Chicago, Illinois

Cynthia M. Phillips, CDE

Clinical Assistant Professor
Department of Pharmacy Practice
and Outcomes Management
South Carolina College of Pharmacy
University of South Carolina
Columbia, South Carolina

Who Should Take This Course

Sales representatives and managers who interact with healthcare professionals, including primary care physicians, family or general practitioners, internists, endocrinologists, pediatricians, and obstetricians and gynecologists who may treat patients with endocrine disorders, and others who would benefit from a knowledge of this important body system.

Career Application/Benefits

Endocrine disorders interfere with hormone production and therefore can cause serious health problems, including diabetes, hypothyroidism, and Graves' disease. Information provided in this course will allow representatives to discuss key features and benefits of pharmaceutical therapies with physicians, pharmacists, and others who treat patients with endocrine disorders. In addition, because of the importance of the endocrine system, the impact of other diseases and treatments on endocrine function must often be considered by the physician. Therefore, this course also has relevance for those whose products may influence endocrine function or may be used to treat conditions that are often seen concurrently with endocrine disorders.

Course Description

This course describes how the endocrine system influences growth and development; reproduction; homeostasis; and energy production, utilization, and storage. It reviews the structure and functions of the hypothalamus and endocrine organs. The course discusses several endocrine disorders, the major drugs used to treat them, and the procedures used to diagnose them.

Related Courses

- Diabetes: Approaches in Disease Management
- Nutrition: Wellness and Disease
- Disease Management
- Introduction to Pharmacology
- Nervous System
- Reproductive Systems

| CHAPTER | CONTENT |
|---|---|
| 1 ANATOMY AND PHYSIOLOGY OF THE ENDOCRINE SYSTEM | Overview of the Endocrine System Hypothalamus Pituitary Gland Thyroid and Parathyroid Glands Adrenal Glands Pancreas Sex Glands Other Organs with Endocrine Activity |
| 2 INTRODUCTION TO ENDOCRINE SYSTEM DISORDERS AND PHARMACOLOGY | Overview of Endocrine System Disorders Pharmacology Relevant to Endocrine System Disorders Pharmacologic Hormones Miscellaneous Classes and Agents |
| 3 DIAGNOSTIC PROCEDURES AND SELECTED ENDOCRINE DISORDERS | Diagnostic Procedures Prolactinomas Graves' Disease and Hypothyroidism Cushing's Syndrome/Disease and Addison's Disease Diabetes Mellitus |

Learning Objectives

Upon successful completion of this course, the student will be able to describe the endocrine system (structure and function) and its component parts; describe the hormones of the endocrine system and their roles; and describe common disorders of the system, their diagnosis, and related pharmacology and terminology.

Who Should Take This Course

Sales representatives and managers who interact with healthcare providers who treat patients with diabetes, including primary care physicians, endocrinologists, pharmacists, healthcare organization professionals and administrators, and those with an interest in the comprehensive management of this disease.

Career Application/Benefits

Many pharmaceutical companies offer a range of diabetes management services to assist healthcare organizations, including value-added services, diabetes screening services, educational programs, and comprehensive diabetes management programs. This provides healthcare representatives, managers, and others with the opportunity to assist healthcare organizations by making them aware of the menu of services that can be customized to meet each organization's specific needs. This course will benefit those in pharmaceutical companies that develop or market products related to the treatment of diabetes and its complications. The information provided in the course will help sales representatives and others understand basic concepts and key issues in diabetes treatment and management so that they can knowledgeably discuss these subjects with healthcare professionals.

Course Description

This course provides information regarding the clinical and economic impact of diabetes and the management strategies being implemented to improve outcomes for patients with diabetes. The course begins with a profile of the disease and its complications, diagnostic procedures, and treatment methods. Next, the course discusses current guidelines for managing patients with diabetes and focuses on preventive measures to reduce the number of hospitalizations and fatalities due to this disease. Examples of how various healthcare organizations and pharmaceutical companies are implementing diabetes management programs are provided, along with a discussion of how these services are offered to healthcare customers.

Related Courses

- Disease Management
- Endocrine System
- Introduction to Pharmacology
- Outcomes: Measurement, Management, and Marketing
- The Managed Healthcare Market
- Nutrition: Wellness and Disease

CHAPTER CONTENT

| CHAPTER | CONTENT |
|---|--|
| 1 OVERVIEW OF DIABETES | Glucose Metabolism and Diabetes Types of Diabetes Complications of Diabetes Screening and Diagnosis of Diabetes Treatment of Diabetes New Treatment Options and Future Directions of Diabetes Therapy Monitoring of Diabetes Economic Impact of Diabetes |
| 2 DIABETES MANAGEMENT GUIDELINES | Clinical Data in Diabetes Guidelines for Managing Diabetes Special Considerations Prevention or Delay of Diabetes |
| 3 DIABETES MANAGEMENT IN HEALTHCARE ORGANIZATIONS | Diabetes Management Programs Outcomes Assessment |
| 4 ROLE OF THE PHARMACEUTICAL INDUSTRY IN DIABETES MANAGEMENT | Relationships with Healthcare Systems Types of Diabetes Management Services Role of the Healthcare Representative |

Learning Objectives

Upon successful completion of this course, the student will be able to describe the epidemiology, pathophysiology, causative factors, treatment options, and economic impact of both Type 1 (insulin-dependent diabetes mellitus), and Type 2 (non-insulin-dependent diabetes mellitus); discuss current clinical practice guidelines for managing patients with diabetes; discuss the implementation of diabetes management programs by employers, insurers, and healthcare organizations; and describe the types of diabetes management programs being developed by various pharmaceutical companies, including opportunities for healthcare representatives.

Diabetes: Approaches in Disease Management

DSM - 402
3 CREDITS

Program(s): CMR

COURSE CONSULTANTS

FIFTH AND SIXTH EDITIONS:

Barry J. Goldstein, MD, PhD

Professor of Medicine
Director, Division of Endocrinology,
Diabetes and Metabolic Diseases
Jefferson Medical College of
Thomas Jefferson University
Philadelphia, Pennsylvania

Cindy Wordell, PharmD

Thomas Jefferson University Hospitals
Department of Pharmacy
Philadelphia, Pennsylvania

Graduate Supplement

DSM - 5402

To earn graduate-level credit, this supplement and course DSM-402 must be successfully completed.

See page 8 for more information about graduate-level credit.

Who Should Take This Course

Sales representatives and managers who interact with healthcare professionals, including primary care physicians, cardiologists, surgeons, physician assistants, and nurses and nurse practitioners, pharmacists, and others who treat patients with cardiovascular (CV) disorders, and those whose products significantly influence the function of the CV system.

Career Application/Benefits

About half of all Americans develop some form of heart disease. Therefore, many healthcare professionals are likely to be involved in some aspect of the prevention and treatment of CV disease. The pharmaceutical industry has developed key agents that treat not only CV disease, but also the risk factors for CV disease. This course will benefit those working for pharmaceutical companies that develop or market products targeted toward CV disease or CV risk factors. Information provided in this course will allow individuals to discuss the value of pharmaceutical therapies with physicians, pharmacists, and others who specialize in the treatment of patients with CV disease or its associated risk factors. In addition, because of the importance of the CV system and the pervasiveness of CV disease, the impact of other diseases and treatments on CV function must often be considered by the physician. Therefore, this course also has relevance for those whose products may influence CV function or may be used to treat conditions that often occur in conjunction with CV disease.

Course Description

This course describes the components of the CV system and how they function to provide transportation and immunity for the body. The course provides an overview of the categories of dysfunction and discusses various CV system drugs, including antihypertensives, cardiac glycosides, inotropics, natriuretic peptides, antianginals, antiarrhythmics, and blood-modifying agents. In addition, the course details a number of specific CV disorders and their treatment, including coronary artery disease, congestive heart failure, valvular disorders, arrhythmias, hypertension, and Hodgkin's disease.

Related Courses

- Disease Management
- Nutrition: Wellness and Disease
- The Pharmaceutical Industry
- Introduction to Pharmacology
- Diabetes: Approaches in Disease Management
- Focus on Women's Health
- Respiratory System

CHAPTER CONTENT

| CHAPTER | CONTENT |
|--|--|
| 1 ANATOMY AND PHYSIOLOGY OF THE CARDIOVASCULAR SYSTEM | Basic Functions and Components of the Cardiovascular System Blood The Heart and Its Blood Supply Arteries, Veins, and Capillaries Circulation and the Heart's Conduction System Blood Flow and Blood Pressure |
| 2 THE LYMPHATIC SYSTEM | Components of the Lymphatic System Lymphatic Circulation Accessory Organs of the Lymphatic System |
| 3 PHARMACOLOGY RELATED TO THE CARDIOVASCULAR SYSTEM | Overview of Cardiovascular System Disorders Pharmacology Relevant to the Cardiovascular System Autonomic Nervous System Drugs Cardiovascular Drugs: Antihypertensives Cardiovascular Drugs: Cardiac Glycosides, Inotropes, Natriuretic Peptides, Antianginals, and Antiarrhythmics Cardiovascular Drugs: Blood Modifying Agents and Antilipemics |
| 4 SELECTED DISORDERS OF THE CARDIOVASCULAR SYSTEM | Cardiovascular Disease: Risk Factors and Diagnosis Coronary Artery Disease Heart Failure (HF) Valvular Disorders and Arrhythmia Systemic Hypertension |

Learning Objectives

Upon successful completion of this course, the student will be able to describe the anatomy, physiology, and functions of the cardiovascular system; common disorders of the cardiovascular system, their etiology and symptoms; and therapeutic classes of drugs appropriate for cardiovascular disorders.

Cardiovascular System

SCI - 423
4 CREDITS

Program(s): CMR

COURSE CONSULTANT

SEVENTH AND EIGHTH EDITIONS:

Robert L. Talbert, PharmD

Professor of Pharmacy
 University of Texas at Austin
 College of Pharmacy
 Professor of Pharmacology and Medicine
 Departments of Pharmacology and Medicine
 University of Texas Health Science Center
 San Antonio, Texas

NINTH EDITION:

Robert L. Talbert, PharmD

Professor of Pharmacy
 University of Texas at Austin
 College of Pharmacy
 Professor of Pharmacology and Medicine
 Department of Medicine
 University of Texas Health Science Center
 San Antonio, Texas

Gregory L. Freeman, MD

Director, Division of Cardiology,
 Department of Medicine
 University of Texas Health Science Center at San Antonio
 San Antonio, Texas



CMR Institute

4423 Pheasant Ridge Road

Suite 100

Roanoke, VA 24014

Phone: 800.328.2615

Fax: 540.989.4720

Web: www.cmrinstitute.org

Email: program@cmrinstitute.org

CMR INSTITUTE

CMR Institute is a leading provider of educational solutions for pharmaceutical and biotechnology representatives and managers. CMR Institute is dedicated to providing unbiased, current, and applicable industry information while increasing knowledge, skills, and understanding of the issues affecting healthcare today.

CMR Institute is a not-for-profit organization with a long standing reputation built upon 40 years of industry service, expert educational solutions, nationally recognized certifications, American Council on Education endorsed curriculum, and distinguished subject matter experts of healthcare professionals and leading industry experts from prestigious universities and academic medical centers across the country.

CMR Institute is one of the world's most respected resources for information relating to the business of healthcare, and continues to develop courses and programs to educate both industry professionals and consumers.

CMR Institute's mission is to advance knowledge to enhance healthcare.

© 2007 The Certified Medical Representatives Institute, Inc., Roanoke, VA 24014. All rights reserved.

No part of this catalog may be reproduced by any method or in any form without written permission from CMR Institute. It is a violation of the copyright act to reproduce any portion of this work; to prepare any materials based on this work; to distribute copies of this work to the public by sale, rental, lease, or otherwise; and to publicly perform any part of this work without the express written permission of CMRI®. Willful violations of the copyright act can result in statutory damages up to \$150,000, imprisonment, and fines.

CMR Institute actively protects its intellectual property, including its copyrightable subject matter, therefore, it reserves the right to refuse orders for CMR Institute educational products in order to prevent copyright infringements.



Advancing knowledge. Enhancing healthcare.®

CMR Institute is a leading provider of educational solutions for pharmaceutical and biotechnology representatives and managers.

CMR Institute's reputation is built upon its nationally recognized certifications, expert training solutions, and 40 years of industry service.