Introduction

Overview
Pharmacology is the study of drugs. The term “drugs” commonly means medications used for diagnosis, treatment, or management of disease. A background in anatomy, physiology, and pathophysiology is needed when learning about drugs and their effects.

This course provides information and instruction about how drugs are used to treat disease, indications and contraindications for use, and adverse effects. You will study the different categories of drugs from a non-clinical perspective, with a focus on the rationale for why specific drugs are prescribed by providers.

To pass this course, you must pass one proctored assessment covering the same material found within this course. Use the preassessment to guide your areas of focus as you study and prepare for the final assessment.

Competencies
This course provides guidance to help you demonstrate the following 9 competencies:

- **Competency 737.2.1: Basic Principles of Pharmacology**
  The graduate evaluates the basic concepts, principles, and standards of general pharmacology.

- **Competency 737.2.2: Pharmacology for the Nervous System**
  The graduate evaluates fundamental concepts associated with pharmaceutical agents that affect the nervous system.

- **Competency 737.2.3: Pharmacology of the Heart**
  The graduate evaluates fundamental concepts associated with pharmaceutical agents used in the treatment of conditions that affect the cardiovascular system.

- **Competency 737.2.4: Pharmacology of Vascular and Renal Systems**
  The graduate analyzes fundamental concepts associated with pharmaceutical agents used in the treatment of vascular and renal system diseases.

- **Competency 737.2.5: Pharmacology of the Respiratory System**
  The graduate analyzes fundamental concepts associated with pharmaceutical agents used in the treatment of respiratory system conditions.

- **Competency 737.2.6: Pharmacology of the Gastrointestinal Tract**
  The graduate analyzes fundamental concepts associated with pharmaceutical agents used in the treatment of conditions that affect the gastrointestinal tracts.

- **Competency 737.2.7: Pharmacology of the Endocrine System**
  The graduate evaluates fundamental concepts associated with pharmaceutical agents used in the treatment of conditions affecting the endocrine system.

- **Competency 737.2.8: Pharmacology of Infectious Diseases**
  The graduate evaluates fundamental concepts associated with the categories of
pharmaceutical products used to treat infectious diseases.

- **Competency 737.2.9: Antineoplastics and Drugs Affecting the Immune System**
The graduate analyzes fundamental concepts associated with pharmaceutical agents used in the treatment of neoplastic diseases and immune system disorders.

**Course Instructor Assistance**
As you prepare to demonstrate competency in this subject, remember that course instructors stand ready to help you reach your educational goals. As subject matter experts, mentors enjoy and take pride in helping students become reflective learners, problem solvers, and critical thinkers. Course instructors are excited to hear from you and eager to work with you.

Successful students report that working with a course instructor is the key to their success. Course instructors are able to share tips on approaches, tools, and skills that can help you apply the content you're studying. They also provide guidance in assessment preparation strategies and troubleshoot areas of deficiency. Even if things don’t work out on your first try, course instructors act as a support system to guide you through the revision process. You should expect to work with course instructors for the duration of your coursework, so you are welcome to contact them as soon as you begin. Course instructors are fully committed to your success!

**Coursework**

The content for this course is broken into eight sections. You may complete two sections a week, or work at your own pace. If you use the weekly model, take a full week or two on the first section, as it is comprised of four chapters. The remainder of the sections are only one chapter's worth of material each.

Each reading assignment includes Activities and Application Exercises. Once you have completed these activities and exercises, you may check you answers using the following answer key:

- [Answer Key](#)

The single link takes you to all the answers for all assigned reading within the course. Once you get to the key, you will have to scroll through to the appropriate chapter's answers.

*Note: These e-texts are available to you as part of your program tuition and fees, but you may purchase a hard copy at your own expense through VitalSource or a retailer of your choice. If you choose to do so, please use the ISBN listed to ensure that you receive the correct edition. The following sites provide instruction on how to create a VitalSource account, use features such as downloading your e-texts for offline use, and purchase a print-on-demand option, if available.*

- [VitalSource Navigational Video](#)
### Basic Principles of Pharmacology

<table>
<thead>
<tr>
<th>Explore</th>
<th>Practice</th>
</tr>
</thead>
</table>
| - Chapter 1 (“History of Pharmacology”)  
- Chapter 2 (“Basics of Pharmacology”)  
- Chapter 3 (“Patient Safety in Medication Administration”)  
- Chapter 4 (“Regulations”) | Activities and Application Exercises |

This section covers the following competency:

- Competency 737.2.1: Basic Principles of Pharmacology  
The graduate evaluates the basic concepts, principles, and standards of general pharmacology.

### Pharmacology for the Nervous System

<table>
<thead>
<tr>
<th>Explore</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>- chapter 13 (“Nervous System Medications”)</td>
<td>Activities and Application Exercises</td>
</tr>
</tbody>
</table>

Activities and Application Exercises

The following charts are included within the chapter above; they are additionally listed here at your convenience for easy viewing and printability:

- Nervous System Medications (ch.13, p. 232)  
- Nervous System Medications—cont’d (ch. 13, p. 233)  
- Nervous System Medications—cont’d (ch. 13, p. 234)  
- Nervous System Medications—cont’d (ch. 13, p. 235)

This section covers the following competency:

- Competency 737.2.2: Pharmacology for the Nervous System  
The graduate evaluates fundamental concepts associated with pharmaceutical agents that affect the nervous system.

### Pharmacology of the Heart

<table>
<thead>
<tr>
<th>Explore</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>- chapter 16: Cardiovascular System Medications</td>
<td>Activities and Application Exercises</td>
</tr>
</tbody>
</table>
The following charts are included within the chapter above; they are additionally listed here at your convenience for easy viewing and printability:

- **Cardiovascular Medications (ch. 16, p. 283)**
- **Cardiovascular Medications—cont’d (ch. 16, p. 284)**
- **Cardiovascular Medications—cont’d (ch. 16, p. 285)**
- **Cardiovascular Medications—cont’d (ch. 16, p. 286)**
- **Cardiovascular Medications—cont’d (ch. 16, p. 287)**

This section covers the following competency:

- **Competency 737.2.3: Pharmacology of the Heart**
  The graduate evaluates fundamental concepts associated with pharmaceutical agents used in the treatment of conditions that affect the cardiovascular system.

### Pharmacology of Vascular and Renal Systems

<table>
<thead>
<tr>
<th>Explore</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>chapter 20: Reproductive and Urinary System Medications</strong></td>
<td>Acronym Drills, Review Questions, and Practical Application</td>
</tr>
</tbody>
</table>

The following charts are included within the chapter above; they are additionally listed here at your convenience for easy viewing and printability:

- **Reproductive and Urinary Medications—cont’d (ch. 20, p. 367)**
- **Reproductive and Urinary Medications—cont’d (ch. 20, p. 368)**

This section covers the following competency:

- **Competency 737.2.4: Pharmacology of Vascular and Renal Systems**
  The graduate analyzes fundamental concepts associated with pharmaceutical agents used in the treatment of vascular and renal system diseases.

### Pharmacology of the Respiratory System

<table>
<thead>
<tr>
<th>Explore</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>chapter 18: Pulmonary System Medications</strong></td>
<td>Activities and Application Exercises</td>
</tr>
</tbody>
</table>
The following charts are included within the chapter above; they are additionally listed here at your convenience for easy viewing and printability:

- **Respiratory Medications (ch. 18, p. 332)**
- **Pulmonary System Medications (ch. 18, p. 333)**
- **Respiratory Medications--cont'd (ch. 18, p. 334)**

This section covers the following competency:

- Competency 737.2.5: Pharmacology of the Respiratory System
  The graduate analyzes fundamental concepts associated with pharmaceutical agents used in the treatment of respiratory system conditions.

### Pharmacology of the Gastrointestinal Tract

<table>
<thead>
<tr>
<th>Explore</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>- chapter 19: (&quot;Gastrointestinal System Medications&quot;)</td>
<td>Activities and Application Exercises</td>
</tr>
</tbody>
</table>

The following charts are included within the chapter above; they are additionally listed here at your convenience for easy viewing and printability:

- **Gastrointestinal Medications (ch. 19, p. 346)**
- **Gastrointestinal Medications—cont'd (ch. 19, p. 347)**
- **Gastrointestinal Medications—cont'd (ch. 19, p. 348)**

This section covers the following competency:

- Competency 737.2.6: Pharmacology of the Gastrointestinal Tract
  The graduate analyzes fundamental concepts associated with pharmaceutical agents used in the treatment of conditions that affect the gastrointestinal tracts.

### Pharmacology of the Endocrine System

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<tr>
<th>Explore</th>
<th>Practice</th>
</tr>
</thead>
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<tr>
<td>- chapter 15 (&quot;Endocrine System Medications&quot;)</td>
<td>Activities and Application Exercises</td>
</tr>
</tbody>
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The “Master the Essentials: Endocrine Medications” chart is found on pages 268 and 269 in the Pharmacology Clear and Simple learning resource in Chapter 15 (“Endocrine System Medications”).

This section covers the following competency:

- Competency 737.2.7: Pharmacology of the Endocrine System
  The graduate evaluates fundamental concepts associated with pharmaceutical agents used in the treatment of conditions affecting the endocrine system.

**Pharmacology of Infectious Diseases and Antineoplastics and Drugs Affecting the Immune System**

<table>
<thead>
<tr>
<th>Explore</th>
<th>Practice</th>
</tr>
</thead>
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<tr>
<td>• chapter 17 (“Immunological System Medications”)</td>
<td>Activities and Application Exercises</td>
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The following charts are included within the chapter above; they are additionally listed here at your convenience for easy viewing and printability:

- **Immunological System Medications** (ch. 17, p. 303)
- **Immunological System Medications—cont’d** (ch. 17, p. 304)
- **Immunological System Medications—cont’d** (ch. 17, p. 305)
- **Immunological System Medications—cont’d** (ch. 17, p. 306)
- **Immunological System Medications—cont’d** (ch. 17, p. 307)
- **Immunological System Medications—cont’d** (ch. 17, p. 308)
- **Immunological System Medications—cont’d** (ch. 17, p. 309)
- **Immunological System Medications—cont’d** (ch. 17, p. 310)
- **Immunological System Medications—cont’d** (ch. 17, p. 311)

This section covers the following competencies:

- Competency 737.2.8: Pharmacology of Infectious Diseases
  The graduate evaluates fundamental concepts associated with the categories of pharmaceutical products used to treat infectious diseases.
- Competency 737.2.9: Antineoplastics and Drugs Affecting the Immune System
  The graduate analyzes fundamental concepts associated with pharmaceutical agents used in the treatment of neoplastic diseases and immune system disorders.