Course Components:

<table>
<thead>
<tr>
<th>Title</th>
<th>Blood Gas Interpretation and Application: ABGs, VBGs, and more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copyright</td>
<td>7/28/2014</td>
</tr>
<tr>
<td>Product Code</td>
<td>075191</td>
</tr>
<tr>
<td>Target Audience</td>
<td>Nurses, Nurse Practitioners, Clinical Nurse Specialists</td>
</tr>
<tr>
<td>Course Description</td>
<td>Examine oxygenation, ventilation, acid-base status and more. No matter the setting you work in you will benefit from gaining understanding through application to case studies. Understand each</td>
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</tbody>
</table>
component of a blood gas measurement and work through several examples encompassing a wide variety of commonly encountered respiratory and metabolic pathologies.

### Course Outline

| I. | Oxygen  
|    |  
|    | A. Metabolism and Variables  
| II. | Carbon Dioxide  
|    | A. Metabolism and Variables  
| III. | Bicarbonate Ion  
|    | A. Metabolism and Variables  
| IV. | Blood Gas Interpretation  
|    | A. Application and Practice

### Objectives

1. Identify factors influencing Oxygen, CO2 and Bicarbonate (HCO3-) levels.
2. Accurately interpret Blood Gasses, to include pH, hypo/hyper oxia, hypo/hyper capnia, base excess/deficit and compensation.
3. Apply Blood Gas analysis in the diagnosis and treatment of respiratory and metabolic disorders.

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### Title

CBCs (Complete Blood Counts) with Differential...Getting the most out of it!

### Product Code

075192

### Copyright

7/28/2014

### Target Audience

Nurses, Nurse Practitioners, Clinical Nurse Specialists

### Course Description

So much more than just H&H (Hemoglobin and Hematocrit), you will learn about the pathophysiology and differential diagnosis of anemias, infection, and coagulopathies during this case based presentation. You will learn the basic as well as advanced clinical applications of the CBC and Differential.

### Course Outline

| I. | Oxygen  
|    |  
|    | A. Hemoglobin, Hematocrit, Indices and more  
| II. | Fighting Infection  
|    | A. White Cells and the hidden language of the Differential  
| III. | Stopping the Bleed  
|    | A. Platelets, Clotting factors, and Coagulopathies

### Objectives (1/hour)

1. Integrate Hemoglobin, Hematocrit, and Indices into a comprehensive assessment.
2. Analyze a Complete Blood Count with Differential and discuss clinical applications. (Differential diagnosis of infection, Left Shifts, etc.)
3. Describe diagnosis and treatment of Platelet dysfunction and other coagulopathies.

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### Title

Focusing on Filtration: Everything Renal

### Product Code

075193

### Copyright

7/28/2014

### Target Audience

Nurses, Nurse Practitioners, Clinical Nurse Specialists

### Course Description

During this seminar presentation, you will learn about both Acute and Chronic Kidney dysfunction, and look at pre- and post-renal analysis of common disorders. Utilizing a case-based approach, you'll gain an understanding of the ins and outs of comprehensive renal differential diagnosis and management. Gain the ability to better treat a patient with either a primary kidney issue or a renal comorbidity.

### Course Outline

| I. | Renal Physiology and variables affecting lab values  
| II. | Electrolytes  
| III. | BUN (Blood Urea Nitrogen)  
| IV. | Creatinine  
| V. | Glomerular Filtration Rate  
| VI. | Urinalysis  
| VII. | Integrated Application

### Objectives (1/hour)

1. Recognize life-threatening electrolyte imbalances, potential causes and remedies.
2. Predict renal function based on BUN, Creatinine, BUN/CR ratio, and GFR.
3. Integrate urinalysis into a comprehensive renal function assessment.

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### Title

Advance Beyond the Basics: Strategies for the Basic Metabolic Panel

### Product Code

075194

### Copyright

7/28/2014

### Target Audience

Nurses, Nurse Practitioners, Clinical Nurse Specialists

### Course Description

You will learn to look beyond the numbers and see that the “Basic” Metabolic Panel (BMP) is anything
BUT basic! Your patients' levels may not be where you think they are, or “normal” may represent anything but homeostasis. Understand important implications for cardiac and renal health, euglycemia, and a proactive approach to patient management. You will also gain insight into common add on labs, their indications and clinical application.

**Course Outline**

<table>
<thead>
<tr>
<th>I. Electrolytes</th>
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</thead>
<tbody>
<tr>
<td>A. Sodium, Potassium, Chloride, Bicarbonate</td>
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</table>

<table>
<thead>
<tr>
<th>II. Blood Urea Nitrogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Acute and Chronic Kidney Dysfunction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. Creatinine</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Acute and Chronic Kidney Dysfunction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV. Glucose</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Hypo/Hyper Glycemia, Diabetic Keto-Acidosis (DKA), Hyperglycemic Hyperosmolar Non-Ketosis (HHNK)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>V. Common Add-On Labs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Ca ++ (Calcium), Mg++ (Magnesium), and PO4 — (Phosphorus)</td>
</tr>
</tbody>
</table>

### Objectives (1/hour)

1. Recognize life-threatening electrolyte imbalances, potential causes and remedies.
2. Relate Acute and Chronic Kidney Injury to BUN and to Creatinine ratio.
3. Describe diagnosis and treatment of spectrum of derangement in Blood Sugar levels.

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**Course Outline**

<table>
<thead>
<tr>
<th>I. Hepatic Dysfunction</th>
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<tbody>
<tr>
<td>A. Acute (Toxicology, Bacterial, Viral)</td>
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<tr>
<td>B. Chronic (Toxicology, Bacterial, Viral)</td>
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</tbody>
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<table>
<thead>
<tr>
<th>II. Gall Bladder</th>
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<tbody>
<tr>
<td>A. Gall Stones</td>
</tr>
<tr>
<td>B. Cancer</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>III. Pancreatic Dysfunction</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Diabetes</td>
</tr>
<tr>
<td>B. Pancreatitis</td>
</tr>
<tr>
<td>C. Cancer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV. Endocrine</th>
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</thead>
<tbody>
<tr>
<td>A. Thyroid</td>
</tr>
<tr>
<td>B. Parathyroid</td>
</tr>
<tr>
<td>C. Adrenal</td>
</tr>
<tr>
<td>D. Pituitary</td>
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<tr>
<td>E. Reproductive</td>
</tr>
</tbody>
</table>

### Objectives

1. Describe diagnosis and treatment of Liver, Gall Bladder, and Pancreatic dysfunction.
2. Recognize Endocrine imbalances, as well as etiology and treatment.
II. Lipid Testing  
   A. Differential Diagnosis/Treatment of Hyperlipidemia  
III. Clotting Function Tests  
   A. Too Little, Too Much or Just Right?

Objectives (1/hour)  
1. Explain the use of Cardiac Markers in differential diagnosis.  
2. Apply lipid testing to patient care with respect to diagnosis and treatment.  
3. Interpret Clotting Function Labs to recognize ranges and appropriate interventions.

Title Microbiology, Virology, Mycology, and Parasitology  
Product Code 075197  
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Target Audience Nurses, Nurse Practitioners, Clinical Nurse Specialists  
Course Description You will learn to correctly diagnose a broad spectrum of possible infectious agents (as well as important possible noninfectious etiologies) through a review of systems, sources of infection, diseases, and treatments. Through understanding of both common and uncommon, yet still vital, diagnoses you will improve your treatment level through this important course.

Course Outline  
I. Neurologic  
   A. Cerebral Spinal Fluid Analysis  
II. Respiratory  
   A. Labs, Imagery, Biopsies  
III. Uro-genital  
   A. Urinary Tract Infections  
IV. Hematologic  
   A. Cultures, Differentials, Sepsis and Systemic Markers  

Objectives (1/hour)  
1. Relate common infectious agents (bacterial, viral, fungal, parasitic) to pathology.  
2. Apply an integrated approach to lab values in differential diagnosis of infective agents.  
3. Discuss interventions and treatment options, relative to etiology and pathology.