Course Syllabus

HITT 2430 – Pathophysiology and Pharmacology

Catalog Description: Study of the pathology and general health management of diseases and injuries across the life span. Topics include etiology, symptoms, and the physical and psychological reactions to diseases and injuries. A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages.

Prerequisites: Students should have completed and passed courses in basic algebra, medical terminology, anatomy and physiology, and basic computer skills.

Semester Credit Hours: 4
Lecture Hours per Week: 3
Lab Hours per Week: 0
Extended hours: 6-9—Additional study is required outside posted class times.
Contact Hours per Semester: 64

State Approval Code: 51.0707

Alternate Operations During Campus Closure: In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Panola College to move to altered operations. During this time, Panola College may opt to continue delivery of instruction through methods that include, but are not limited to: online learning management system (CANVAS), online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor Panola College’s website (www.panola.edu) for instructions about continuing courses remotely, CANVAS for each class for course-specific communication, and Panola College email for important general information.

Instructional Goals and Purposes: The purpose of this course is to identify specific common human diseases, disorders, and their medical and surgical therapies. This course introduces allied health students to the fundamentals of, and correlations among, anatomy and physiology, pharmacology, and pharmacology practices. The main objective is to provide students with an accessible and meaningful approach to pharmacology and to apply basic concepts to identifying common medications and their administration.

Learning Outcomes:
1. Identify specific common human diseases
2. Identify specific common human disorders
3. Identify specific medical and surgical therapies for common human diseases and disorders
4. Understand drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages.

Specific Course Objectives (includes SCANS):
After studying all materials and resources presented in the course, the student will be able to have an understanding and identify the following:

- History and principles of pharmacology
- Sources of drugs
- Drug nomenclature
- Drug review and approval process
- Drug classifications
- Uses of drugs
- Pharmacokinetic processes of drugs in the body
- Routes of drug administration
- Drug response factors
- Prescriptions and medication orders
- Pharmacy measurements and calculations
- Medication safety
- Major body systems and their associated disorders and drug therapies
- Pharmacotherapy for multisystem, including drugs for pain and anesthesia, fluids and electrolytes, and cancer and chemotherapy
- Drug therapies for specialized patient populations, such as pediatrics and geriatrics
- Roles and responsibilities of allied health professionals

**Course Content:**
A general description of lecture/discussion topics included in this course are listed in the Learning Outcomes / Specific Course Objectives sections of this syllabus. (see above sections)

**Methods of Instruction/Course Format/Delivery:**
This course is offered online. Students will be required to have access to computer technology. Just having a smart phone will not enable one to successfully navigate this course. Students will need to allot 6-8 hours of additional study, outside posted class times for successful completion of this course.

Students are expected to demonstrate basic competency in reading, writing, oral communication, math, and computer skills. Students are expected to be an active learning participant by assuming accountability in preparing for each class by completing required readings and/or other learning activities as listed in each unit assignment. Proficiency will be measured by examination scores, case studies and internet research activities.

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Students should use the Email within Canvas to communicate with the instructor. Using Canvas email gives you access to the instructor and other classmates without having to remember or type email addresses – you must select a name from the list. If you are not able to contact me using email in Canvas, you may use my Panola College email address, contact me by telephone, or stop by my office. I attempt to respond to all email within 24 hours. Please always include a subject line and your name in your email.

**Major Assignments / Assessments:**
The following items will be assigned and assessed during the semester and used to calculate the student's final grade.

**Assignments**
1. Assignments
2. End-of-chapter exercises
3. Handouts
4. Pharmacy calculation practice problems
5. Case studies/ Quizzes
6. Exams 3 total (10% each)
7. Final Exam

**Assessment(s):**
1. Exams (3 total)
2. Final Exam- cumulative
3. Case Studies- 2 total
4. Quizzes- 3 total
5. Course assignments

**Course Grade:**
The grading scale for this course is as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance/class participation</td>
<td>10%</td>
</tr>
<tr>
<td>Assignments</td>
<td>15%</td>
</tr>
<tr>
<td>Homework</td>
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<tr>
<td>End-of-chapter exercises</td>
<td></td>
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<tr>
<td>Handouts</td>
<td></td>
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<tr>
<td>Pharmacy calculation practice problems</td>
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<tr>
<td>Case studies/ Quizzes</td>
<td>25%</td>
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<tr>
<td>Exams 3 total (10% each)</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
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</tbody>
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**Texts, Materials, and Supplies:**

**Required Readings:**
*Pharmacology Essentials for Allied Health, First Edition*
*Pharmacology Essentials for Allied Health* Student eBook
*Pharmacology Essentials for Allied Health* Navigator

**Recommended Readings:**
Paradigm Education Solutions’ *Pocket Drug Guide: Generic-Brand Name Reference*
Paradigm Education Solutions’ *What Language Does Your Patient Hurt In?*

**Other:**
- For current texts and materials, use the following link to access bookstore listings: [https://www.panolacollegestore.com](https://www.panolacollegestore.com)
- For testing services, use the following link: [https://www.panola.edu/elearning/testing.html](https://www.panola.edu/elearning/testing.html)
- If any student in this class has special classroom or testing needs because of a physical learning or emotional condition, please contact the ADA Student Coordinator in Support Services located in the Charles C. Matthews Student Center or go to [https://www.panola.edu/student-success/disability-support-services/](https://www.panola.edu/student-success/disability-support-services/) for more information.
- Withdrawing from a course is the student’s responsibility. Students who do not attend class and who do not withdraw will receive the grade earned for the course.
SCANS CRITERIA

1) **Foundation skills are defined in three areas: basic skills, thinking skills, and personal qualities.**

a) **Basic Skills:** A worker must read, write, perform arithmetic and mathematical operations, listen, and speak effectively. These skills include:
   i) Reading: locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.
   ii) Writing: communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.
   iii) Arithmetic and Mathematical Operations: perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.
   iv) Listening: receive, attend to, interpret, and respond to verbal messages and other cues.
   v) Speaking: Organize ideas and communicate orally.

b) **Thinking Skills:** A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively. These skills include:
   i) Creative Thinking: generate new ideas.
   ii) Decision Making: specify goals and constraints, generate alternatives, consider risks, and evaluate and choose the best alternative.
   iii) Problem Solving: recognize problems and devise and implement plan of action.
   iv) Visualize (“Seeing Things in the Mind’s Eye”): organize and process symbols, pictures, graphs, objects, and other information.
   v) Knowing How to Learn: use efficient learning techniques to acquire and apply new knowledge and skills.
   vi) Reasoning: discover a rule or principle underlying the relationship between two or more objects and apply it when solving a problem.

c) **Personal Qualities:** A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.
   i) Responsibility: exert a high level of effort and persevere toward goal attainment.
   ii) Self-Esteem: believe in one’s own self-worth and maintain a positive view of oneself.
   iii) Sociability: demonstrate understanding, friendliness, adaptability, empathy, and politeness in group settings.
   iv) Self-Management: assess oneself accurately, set personal goals, monitor progress, and exhibit self-control.
   v) Integrity and Honesty: choose ethical courses of action.

2) **Workplace competencies are defined in five areas: resources, interpersonal skills, information, systems, and technology.**

a) **Resources:** A worker must identify, organize, plan, and allocate resources effectively.
   i) Time: select goal-relevant activities, rank them, allocate time, and prepare and follow schedules.
   ii) Money: Use or prepare budgets, make forecasts, keep records, and make adjustments to meet objectives.
   iii) Material and Facilities: Acquire, store, allocate, and use materials or space efficiently. Examples: construct a decision time line chart; use computer software to plan a project; prepare a budget; conduct a cost/benefits analysis; design an RFP process; write a job description; develop a staffing plan.

b) **Interpersonal Skills:** A worker must work with others effectively.
   i) Participate as a Member of a Team: contribute to group effort.
   ii) Teach Others New Skills.
   iii) Serve Clients/Customers: work to satisfy customer’s expectations.
iv) Exercise Leadership: communicate ideas to justify position, persuade and convince others, responsibly challenge existing procedures and policies.

v) Negotiate: work toward agreements involving exchange of resources, resolve divergent interests.

vi) Work with Diversity: work well with men and women from diverse backgrounds.
Examples: collaborate with a group member to solve a problem; work through a group conflict situation, train a colleague; deal with a dissatisfied customer in person; select and use appropriate leadership styles; use effective delegation techniques; conduct an individual or team negotiation; demonstrate an understanding of how people from different cultural backgrounds might behave in various situations.

c) Information: A worker must be able to acquire and use information.
   i) Acquire and Evaluate Information.
   ii) Organize and Maintain Information.
   iii) Interpret and Communicate Information.
   iv) Use Computers to Process Information.
Examples: research and collect data from various sources; develop a form to collect data; develop an inventory record-keeping system; produce a report using graphics; make an oral presentation using various media; use on-line computer data bases to research a report; use a computer spreadsheet to develop a budget.

d) Systems: A worker must understand complex interrelationships.
   i) Understand Systems: know how social, organizational, and technological systems work and operate effectively with them.
   ii) Monitor and Correct Performance: distinguish trends, predict impacts on system operations, diagnose deviations in systems’ performance and correct malfunctions.
   iii) Improve or Design Systems: suggest modifications to existing systems and develop new or alternative systems to improve performance.
Examples: draw and interpret an organizational chart; develop a monitoring process; choose a situation needing improvement, break it down, examine it, propose an improvement, and implement it.

e) Technology: A worker must be able to work with a variety of technologies.
   i) Select Technology: choose procedures, tools or equipment including computers and related technologies.
   ii) Apply Technologies to Task: understand overall intent and proper procedures for setup and operation of equipment.
   iii) Maintain and Troubleshoot Equipment: Prevent, identify, or solve problems with equipment, including computers and other technologies.
Examples: read equipment descriptions and technical specifications to select equipment to meet needs; set up and assemble appropriate equipment from instructions; read and follow directions for troubleshooting and repairing equipment.