SYLLABUS FOR
PHRA-1209 Pharmacy Math I
Spring 2016

INSTRUCTOR:  Angelia Torrez, BSN, RN, AAS, CMA, CPhT
OFFICE:      # 242
PHONE:       325-428-6471 (No text or calls after 10pm, M-F)
OFFICE HOURS: By appointment only

COURSE DESCRIPTION:
Pharmaceutical mathematics including reading, interpreting, and solving calculation problems encountered in the preparation and distribution of drugs.

TIME ALLOTMENT:
Semester: Spring 2016  Credit: 2 Semester Hour
Lecture Hours:  1  Laboratory Hours:  2

END-OF-COURSE OUTCOMES:
The course provides the safe and effective calculation of drug dosages related to oral, parenteral, and intravenous medication preparation. Learners will:
- Solve basic math problems and demonstrate conversion between various systems of measurement including temperature, household, metric, apothecary, and avoirdupois
- Perform adult and pediatric dosage calculations
- Calculate IV flow rates

COURSE OBJECTIVES:
1. Calculate dosages using basic systems of measurement
2. Convert measurements within the same system and from one system to another
3. Interpret drug orders
4. Utilize the information on medication labels to calculate prescribed dosages
5. Calculate adult and pediatric drug dosages based on weight
7. Perform advanced calculations related to body surface area and advanced pediatric calculations.

ASHP Goals

Didactic
Foundational Professional Knowledge and Skills
Goal 12: Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of contemporary settings.

COURSE STRUCTURE:
This course will meet Tuesday evenings for two (2) hours from 4:00 p.m. to 5:55 p.m. for lecture in room # 235.
REQUIRED TEXTBOOKS AND MATERIALS:

*Morris, D; Calculate with Confidence; 6th ed; Mosby*

Basic Calculator is required

#2 Pencil

COURSE REQUIREMENTS:

Students are required to complete each lesson within the course schedule, complete each Module Learning Activities and quizzes and Chapter Exams to demonstrate mastery of basic knowledge and skills. Students may use calculators for mathematical calculations.

STUDENT CONDUCT:

Students are expected to take responsibility in helping to maintain a classroom environment that is conductive to learning. In order to assure that all students have the opportunity to gain from the time spent in class, students are prohibited from using cell phones or beepers, making offensive remarks, reading material not related to class, sleeping, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result, at a minimum, in a request to leave class. A more detailed list of inappropriate behaviors is found in the current student handbook. **ANY STUDENTS CELL PHONE THAT GOES OFF DURING CLASS WILL AUTOMATICALLY HAVE 10 POINTS DEDUCTED FROM NEXT EXAM!**

PLEASE SILENCE YOUR CELL PHONES BEFORE COMING TO CLASS.

STUDENT RESPONSIBILITIES:

It is the student’s responsibility to come to class prepared and ready for class. If homework is assigned, then it should be completed prior to class. All assignments are to be turned in on due date. Exams are to be taken in class, with the use of a basic calculator only. All work must be shown on each problem to achieve the highest score. Points will be deducted if work is not shown on assignment. If the student is to be absent from class, prior notice should be given to the instructor, 20 points will automatically be deducted for late assignment.

EVALUATION METHODS INCLUDING GRADING:

The final grade for the course is based upon the average of the unit grades/exams, assignments and a comprehensive final examination. The comprehensive final examination given at the end of the course is for the sole purpose of demonstrating that the student has acquired the basic knowledge required for safe and effective health care delivery practice at the student’s level of progression in the program.

**Final Grade Comprised of:**

1. Average of Six (6) Exam Grades
2. Final Comprehensive Exam (Must make 75 or better)

**NOTE:** The student will receive a grade of “F” in the course if the student fails to achieve a minimum score of 75 on the Comprehensive Course examination, regardless of the numerical average based on the unit exams and projects.
Summary of criteria for assignment of letter grade for the course:

1. All requirements for satisfactory completion of the Module components of the course must be met.
2. Average of Module quizzes and assigned projects must be at least 70 for the students to receive a minimum of a C in the course.
3. Comprehensive Course Examination score must be at least 75
4. If you are absent on an exam day, you will have 1 week (by the following Tuesday @ 2pm) to make the exam up. The highest possible score resulting in a 70. If you fail to take exam by required time resulting score will be zero (0).
4. Course letter grades will be determined by the average of the scores on the unit examinations and assigned projects according to the College grading scale:

   A = 90 – 100
   B = 80 - 89
   C = 70 – 79
   D = 60 - 69
   F = 59 or less

ATTENDANCE POLICY:

1. No more than three (3) classroom absences. Exceptions will be up to the instructor.
2. Three (3) tardies will equal one (1) absence. Tardy is defined as being more than 15 minutes late for class / lab.
3. Absences immediately before or after a holiday may be counted as DOUBLE absences.

ACADEMIC DISHONESTY:

All student conduct will support academic honesty. Any student who is cheating on an exam or used the thought or words of others without proper citation will receive an F or zero grade and may fail the course. The student will then be expelled from the program with a letter in the students file explaining the terms of the F on their transcript. The department goal is that each student completes his or her own work in order to master the skills needed to compete in the job market.

COURSE CONTENT:

College-level courses may include controversial, sensitive, and/or adult material. Students are expected to have the readiness for college-level rigor and content.

ACADEMIC INTEGRITY:

It is the intent of Cisco College to foster a spirit of complete honesty and a high standard of integrity. The attempt of students to present as their own any work they have not honestly performed is regarded by the faculty and administration as a serious offense and renders the offender liable to serious consequences, possibly suspension.
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Students are expected to take responsibility in helping to maintain a classroom environment that is conducive to learning. In order to assure that all students have the opportunity to gain from the time spent in class, students are prohibited from using cell phones or beepers, making offensive remarks, reading material not related to class, sleeping, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result, at a minimum, in a request to leave class. A more detailed list of inappropriate behaviors is found in the current student handbook. ALL CELLS PHONES ARE TO BE SILENCED AND PUT AWAY BEFORE CLASS BEGINS. IF YOUR PHONE RINGS IN CLASS, 10 POINTS WILL AUTOMATICALLY BE DEDUCTED FROM YOUR NEXT EXAM.

STUDENTS WITH SPECIAL NEEDS:

Students who qualify for specific accommodations under the Americans with Disabilities Act (ADA) should notify the instructor the first week of class. It is the student’s responsibility to provide the necessary documentation to the Special Populations Coordinator.

STUDENT TECHNOLOGY USE IN CLASSROOM POLICY:

Use of communication devices, which include but is not limited to cell phones, palm devices, and laptops, is prohibited. All devices must be turned off and should not be taken out during class. Use of any communication device or data storage device during a test, unless express permission has been granted by the instructor, may result in a charge of academic dishonesty. Exceptions to this policy may be granted at the discretion of the instructor.

CHANGES TO THE SYLLABUS:

The schedule and procedures in this syllabus are subject to change if deemed appropriate by the instructor.

Revised 6/14 cm
**SCAN COMPETENCIES:**

**SCANS Competencies:** A description of all SCANS Competencies is attached.

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<th><strong>Interpersonal</strong></th>
<th><strong>Information</strong></th>
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<td>6.1 Reading: Carefully assimilates materials including all reading assignments and prioritizes and interprets information.</td>
<td>7.1 Creative Thinking: Connects theory with practice and formulates new personal goals.</td>
<td>8.1 Responsibility: Displays high standards of attendance and punctuality in class.</td>
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<td>6.3 Arithmetic: Students perform basic computations through modules in basic numerical concepts, such as whole numbers and percentages in practical situations.</td>
<td>7.3 Problem Solving: Through course work; identifies problems that exist, reasons for discrepancies, and implements plan of action for resolution of the problem.</td>
<td>8.2 Self Esteem: Leaves course with confidence in the ability to demonstrate knowledge of pharmaceutical math equations and how it relates to patient care.</td>
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<td>6.4 Mathematics: Approaches practical problems by choosing appropriately from a variety of mathematical techniques throughout each module.</td>
<td>7.5 Knowing How to Learn: In current course students are able to apply learning techniques to online course work.</td>
<td>8.4 Self-Management: Assess own knowledge, skills, and abilities accurately through completion of course work assignments.</td>
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SCANS COMPETENCIES

SCANS COMPETENCIES WITH DEFINITIONS

1.0 RESOURCES

- 1.1 Manages Time: Selects relevant, goal-related activities, ranks them in order of importance, allocates time to activities, and understands, prepares, and follows schedules.
- 1.2 Manages Money: Uses or prepares budgets, including making cost and revenue forecasts, keeps detailed records to track budget performance, and makes appropriate adjustments.
- 1.3 Manages Materials and Facility Resources: Acquires, stores, and distributes materials, supplies, parts, equipment, space, or final products in order to make the best use of them.
- 1.4 Manages Human Resources: Assesses knowledge and skills and distributes work accordingly, evaluates performance, and provides feedback.

2.0 INTERPERSONAL

- 2.1 Participates as a Member of a Team: Works cooperatively with others and contributes to group with ideas, suggestions, and effort.
- 2.2 Teaches Others: Helps others to learn.
- 2.3 Serves Clients/Customers: Works and communicates with clients and customers to satisfy their expectations.
- 2.4 Exercises Leadership: Communicates thoughts, feelings, and ideas to justify a position, encourages, persuades, convinces, or otherwise motivates an individual or groups; including responsibility challenging existing procedures, policies, or authority.
- 2.5 Negotiates: Works toward an agreement that may involve exchanging specific resources or resolving divergent interests.
- 2.6 Works with Cultural Diversity: Works well with men and women and with a variety of ethnic, social, or educational backgrounds.

3.0 INFORMATION

- 3.1 Acquires and Evaluates Information: Identifies need for data, obtains it from existing sources or creates it and evaluates its relevance and accuracy.
- 3.2 Organizes and Maintains Information: Organizes, processes, and maintains written or computerized reports and other forms of information in a systematic fashion.
- 3.3 Uses Computers to Process Information: Employs computers to acquire, organize, analyze, and communicate information.

4.0 SYSTEMS

- 4.1 Understands Systems: Knows how social, organizational, and technological systems work and operates effectively within them.
- 4.2 Monitors and Corrects Performance: Distinguishes trends, predicts impact of actions on system operations, diagnoses deviations in the function of a system/organization, and takes necessary action to correct performance.
- 4.3 Improves and Designs Systems: Makes suggestions to modify existing systems to improve products or services, and develops new or alternative systems.
5.0 TECHNOLOGY

- 5.1 Selects Technology: Judges which set of procedures, tools, or machines, including computers and their programs will produce the desired results.
- 5.2 Applies Technology to Task: Understands the overall intent and the proper procedures for setting up and operating machines, including computers and their programming systems.
- 5.3 Maintains and Troubleshoots Technology: Prevents, identifies, or solves problems in machines, computers and other technologies.

SCANS FOUNDATION SKILLS

6.0 BASIC SKILLS

- 6.1 Reading: Locates, understands, and interprets written information in prose and documents – including manuals, graphs, and schedules to perform tasks. Learns from text by determining the main idea or essential message; identifies relevant details, facts, and specifications: infers or locates the meaning of unknown or technical vocabulary, and judges the accuracy, appropriateness, style, and plausibility of reports, proposals, or theories of other writers.
- 6.2 Writing: Communicates thoughts, ideas, information, and messages in writing; records information completely and accurately; composes and creates documents such as letters, directions, manuals, reports, proposals, graphs, flow charts; uses language, style, organization, and format appropriate to the subject-matter, purpose, and audience. Includes supporting documentation and attends to level of detail; checks, edits, and revises for correct information, appropriate emphasis, form, grammar, spelling, and punctuation.
- 6.3 Arithmetic: Performs basic computations; uses basic numerical concepts such as whole numbers and percentages in practical situations; makes reasonable estimates of arithmetic results without a calculator, and uses tables, graphs, diagrams, and charts to obtain or convey quantitative information.
- 6.4 Mathematics: Approaches practical problems by choosing appropriately from a variety of mathematical techniques; uses quantitative data to construct logical explanations for real world situations; expresses mathematical ideas and concepts orally and in writing; and understands the role of chance in the occurrence and prediction of events.
- 6.5 Listening: Receives, attends to, interprets, and responds to verbal messages and other cues such as body language in ways that are appropriate to the purpose; for example, to comprehend; to learn, to critically evaluate; to appreciate, or to support the speaker.
- 6.6 Speaking: Organizes ideas and communicates oral messages appropriate to listeners and situations; participates in conversation, discussion and group presentations; selects an appropriate medium for conveying a message; uses verbal language and other cues such as body language appropriate in style, tone, and level of complexity to the audience and the occasion; speaks clearly and communicates a message; understands and responds to listener feedback; and asks questions when needed.
7.0 THINKING SKILLS

- **7.1 Creative Thinking**: Uses imagination freely, combines ideas or information in new ways, makes connections between seemingly unrelated ideas, and reshapes goals in ways that reveal new possibilities.

- **7.2 Decision Making**: Specifies goals and constraints, generates alternatives, considers risks and evaluates and chooses best alternatives.

- **7.3 Problem Solving**: Recognizes that a problem exists (i.e., there is a discrepancy between what is and what should or could be), identifies possible reasons for the discrepancy, and devises and implements a plan of action to resolve it. Evaluates and monitors progress, and revises plan as indicated by findings.

- **7.4 Mental Visualization**: Organizes and processes symbols, pictures, graphs, objects, or other information; for example, sees a building from a blueprint, a system’s operation from schematics, the flow of work activities from narrative descriptions, or the taste of food from reading a recipe.

- **7.5 Knowing How To Learn**: Recognizes and can use learning techniques to apply and adapt new knowledge and skills in both familiar and changing situations. Involves being aware of learning tools such as personal learning styles (visual, aural, etc.), formal learning strategies (note taking or clustering items that share some characteristics), and informal learning strategies (awareness of unidentified false assumptions that may lead to faulty conclusions).

- **7.6 Reasoning**: Discovers a rule or principle underlying the relationship between two or more objects and applies it in solving a problem. For example, uses logic to draw conclusions from available information, extracts rules or principles from a set of objects or written text; applies rules and principles to a new situation, or determines which conclusions are correct when given a set of facts and a set of conclusions.

8.0 PERSONAL QUALITIES

- **8.1 Responsibility**: Exerts a high level of effort and perseverance towards goal attainment. Works hard to become excellent at doing tasks by setting high standards. Works hard to become excellent at doing tasks by setting high standards, paying attention to details, working well and displaying a high level of concentration even when assigned an unpleasant task. Displays high standards of attendance, punctuality, enthusiasm, vitality, and optimism in approaching and completing tasks.

- **8.2 Self-Esteem**: Believes in own self-worth and maintains a positive view of self; demonstrates knowledge of own skills and abilities; is aware of impact on others; and knows own emotional capacity and needs and how to address them.

- **8.3 Sociability**: Demonstrates understanding, friendliness, adaptability, empathy, and politeness in new and ongoing group settings. Asserts self in familiar and unfamiliar social situations; relates well to others; responds appropriately as the situation requires; and takes an interest in what others say and do.

- **8.4 Self-Management**: Assesses own knowledge, skills, and abilities accurately; sets well-defined and realistic personal goals, monitors progress goal attainment and motivates self through goal achievement; exhibits self-control and responds to feedback unemotionally and non-defensively, is a “self-starter.”

- **8.5 Integrity/Honesty**: Can be trusted. Recognizes when faced with making a decision or exhibiting behavior that may break with commonly held personal or societal values; understands the impact of violating these beliefs and codes on an organization, self, and others; and chooses an ethical course of action.
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<th>Competency Outcome</th>
<th>SCANS Competency</th>
<th>Strategies</th>
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<tbody>
<tr>
<td>Communication</td>
<td>Comprehend various types of written and spoken information.</td>
<td>Section 2.5 Negotiate to arrive at a decision</td>
<td>Compose and create documents such as letters, directions, manuals, reports, graphs and flow charts; use language, style, organization, and format appropriate to the subject matter, purpose, and audience.</td>
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<tr>
<td>Communication</td>
<td>Create oral and written works that utilize research, organization, and proper editing.</td>
<td>Section 2.2 Teach others, Sections 2.3 Serve clients/customers, Section 2.4 Exercise leadership, Section 3.3 Interpret and communicate information, Section 6.5 Listen and react appropriately to listeners.</td>
<td>Select information to be communicated; identify best methods for research; organizations; and delivery; communicate results to others in desired format.</td>
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<tr>
<td>Communication</td>
<td>Evaluate the oral and written communication of others.</td>
<td>Section 2.1 Participate as a member of a team</td>
<td>Contribute to group with ideas, suggestions, and efforts.</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>Embrace methods for applying both qualitative and quantitative skills for analytical purposes.</td>
<td>Section 1.4 Manage human resources effectively, Section 4.2 Monitor and correct performance of a system, Section 4.3 Improve and design systems, Section 7.3 Apply problem solving skills appropriate to situation.</td>
<td>Recognize a problem exists; identify possible reason for the problem, devise and implement a plan of action to resolve the problem, monitor the progress, revise plans, and apply problem solving methods.</td>
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<tr>
<td>Critical Thinking</td>
<td>Use problem solving strategies to address an identified task.</td>
<td>Section 1.4 Manage human resources effectively, Section 4.2 Monitor and correct performance of a system, Section 4.3 Improve and design systems, Section 7.3 Apply problem solving skills appropriate to situation.</td>
<td>Recognize a problem exists; identify possible reason for the problem, devise and implement a plan of action to resolve the problem, monitor the progress, revise plans, and apply problem solving methods.</td>
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<td>Critical Thinking</td>
<td>Evaluate arguments and construct alternative strategies.</td>
<td>Section 3.1 Acquire and evaluate information, Section 4.1 Apply appropriate techniques to function within social, organizational, and technological systems to attain goals effectively and ethically, Section 7.6 Apply reasoning to finding solutions or draw conclusions.</td>
<td>Discover a rule or principle underlying the relationship between two or more objects; extract rules or principles from a set object or a written text.</td>
</tr>
<tr>
<td>Computer Literacy</td>
<td>Use computers to create, modify, retrieve, store, and output files</td>
<td>Section 2.1 Participate as a member of a team, Section 2.2 Teach others, Sections 2.3 Serve clients/customers, Section 2.4 Exercise leadership, Section 3.3 Interpret and communicate information.</td>
<td>Determine the desired results or outcomes and applicable constraints of technology; visualize the necessary methods and applicable technology.</td>
</tr>
<tr>
<td>Computer Literacy</td>
<td>Use the Internet to send or receive information</td>
<td>Section 2.1 Participate as a member of a team, Section 2.2 Teach others, Sections 2.3 Serve clients/customers, Section 2.4 Exercise leadership, Section 3.3 Interpret and communicate information.</td>
<td>Communicate information using email, list servers, word processor, or other computer based communication functions.</td>
</tr>
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<td>Cultural Awareness</td>
<td>Interpret other cultures based on a broader world view.</td>
<td>Section 2.6 Work with cultural diversity.</td>
<td>Work with men and women, and a variety of ethnic, social, and educational backgrounds; compare one's own culture and that of others; respect the rights of others while helping them make cultural adjustments when necessary.</td>
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<tr>
<td>Cultural Awareness</td>
<td>Display an openness to different viewpoints.</td>
<td>Section 2.6 Work with cultural diversity.</td>
<td>Base impression upon individual performance, not stereotypes.</td>
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<td>Cultural Awareness</td>
<td>Develop an appreciation for diversity and intercultural relationships.</td>
<td>Section 2.6 Work with cultural diversity.</td>
<td>Understand concerns of members of other ethnic and gender groups.</td>
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<td>Educational Self Reliance</td>
<td>Utilize student services available at college setting</td>
<td>Section 1.3 Manage material and facility resources effectively.</td>
<td>Understand the processes associated with educational systems; utilize the necessary offices, and/or resources for educational matriculation.</td>
</tr>
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<td>Educational Self Reliance</td>
<td>Promote his or her educational success</td>
<td>Section 1.1 Manage time effectively</td>
<td>Manage time, finances and other resources for educational pursuit effectively.</td>
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<td>Educational Self Reliance</td>
<td>Enhance his or her quality of life</td>
<td>Section 1.2 Manage money effectively, Section 1.3 Manage time effectively, Section 1.4 Manage human resources effectively.</td>
<td>Persevere toward goal attainment with high level of effort; maintain a positive attitude of self and believes in own self-worth.</td>
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<td>Educational Self Reliance</td>
<td>Develop the capacity for life-long learning</td>
<td>Section 7.5 Apply learning strategies to support life-long learning.</td>
<td>Apply and adapt existing and new knowledge and skills, using learning techniques, both familiar and changing situations.</td>
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INSTRUCTOR:  Kelly Meyer

OFFICE:  239

PHONE:   (325) 794-4441

Email:   kelly.meyer@cisco.edu

OFFICE HOURS:  By Appointment Only

COURSE DESCRIPTION:

A study of disease processes, pharmaceutical drugs, abbreviations, classifications, dosages, actions in the body, and routes of administration.

TIME ALLOTMENT:  Semester: First or Second  Credit: 3 Semester Hours
Lecture Hours 3  Clinical/Laboratory Hours 0

PURPOSE AND LEARNING OUTCOMES OF THE COURSE:

This course provides the basic knowledge required by health-care students to integrate pharmacology in individual health care practice. Client safety is the ultimate responsibility of all health care providers.

The learner will:

- Identify drug dosages, routes of administration, and dosage forms.
- Define various disease processes, patterns and pathogenic organisms.
- Identify the various types of drugs utilized in the treatment of each disease process

COURSE OBJECTIVES:

1. Apply pharmacology in an ethical/holistic perspective.
2. Recognize the onset of undesirable drug induced effects and plan appropriate interventions employing the nursing process.
3. Classify and identify major drugs as to action and indications for usage
4. Identify and apply health implications indicated by specific drug therapy.
5. Communicate pharmacology knowledge to clients/family. Apply fundamental patient/family teaching principles to effectively manage medication regimen.
COURSE STRUCTURE:

This course is set up to allow students to learn drug classification at a set pace on-line. Students are expected to participate in discussion, activities and assigned projects.

EXIT COMPETENCIES:

- Recognize medications by their therapeutic and pharmacological classifications
- Know signs and symptoms to look for in drug and food interactions
- Have a brief understanding of pharmacokinetics and pharmacodynamics

ASHP Goals

Didactic

Foundational Professional Knowledge and Skills

Goal 11: Demonstrate knowledge and skills in areas of science relevant to the pharmacy technician’s role, including anatomy/physiology and pharmacology

REQUIRED TEXTBOOKS AND MATERIALS:


RECOMMENDED OPTIONAL MATERIALS AND RESOURCES:

Program textbooks may be useful for integrating pharmacology with other course work. Students may be required to access information through internet or library sources.

COURSE REQUIREMENTS:

1. Students must read the previous chapter(s) and be prepared to participate in on-line discussions.
2. Completion of all eight Examinations
3. Students must have an average in the course of at least 70% in order to take the required final competency examination.
4. Completion of the Final Examination with a score of 75% or better.

EVALUATION METHODS INCLUDING GRADING:

The final grade for the course will be based upon the following criteria:

1. Unit Exams (8) 60%
2. Classroom Discussion and activities (8) 20%
3. Newsletter (8) 20%
• The exam schedule allows students to take the test in a weekly time frame

• If a student feels that they are ready to take an exam outside the set time frame, they need to contact the instructor by Canvas e-mail. The professor will respond daily to all e-mail questions within a 24 hour time.

• It is your responsibility to notify the instructor prior to the testing date and/or the make-up date if you are unable to take the exam during the allotted time frame.

• Failure to notify the instructor in a timely manner will result in exam point deduction.

• Regardless of your semester average, you must make at least a 75 on the final competency or the highest grade awarded in this course will be a D.

FINAL EXAM: May 12, to be done by 12 Noon.

Summary of criteria for assignment of letter grade for the course:

1. Average of unit exams and assigned projects must be at least 70 for the students to receive a minimum of a C in the course.
2. Comprehensive Course Examination score must be at least 75.
3. Course letter grades will be determined by the average of the scores on the two sections of the course according to the College grading scale:

   A = 90 – 100
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ATTENDANCE POLICY:

If a student fails to have an online presence (Canvas) for more than three weeks, they will be dropped. The student should contact the instructor if they are having a problem with their/our computer system.

STUDENT CONTRIBUTIONS:

Since this is an on-line class, it is the responsibility of the student to check Canvas daily for emails from the instructor, to take exams at the scheduled times, and complete all assignments on time. Since there are not “formal” class-meetings, student must be very self-disciplined and spend time on the course each day. Expect to spend 8 hours or more per week reading and studying the textbook material, completing suggested textbook assignments, completing chapter material and quizzes, posting discussion questions, responding to posted discussion questions from the instructor, and preparing for exams. It is the utmost importance that students stay current with their assignments and turn them in on time.

STUDENT RESPONSIBILITES:

The excuse of not having a computer will not be accepted. It is totally your responsibility that you have access to a working computer with an internet connection. If your computer malfunctions during the semester, the CC Abilene Library is available.
DON'T WAIT UNTIL THE LAST MINUTE TO COMPLETE YOUR EXAMS AND ASSIGNMENTS.

COURSE CONTENT:

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<th>Thinking Skills</th>
<th>Personal Qualities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6.1 Reading:</strong> Carefully assimilates materials including all reading assignments and prioritizes and interprets information.</td>
<td><strong>7.1 Creative Thinking:</strong> Connects theory with practice and formulates new personal goals.</td>
<td><strong>8.1 Responsibility:</strong> Displays high standards of attendance and punctuality in class.</td>
</tr>
<tr>
<td><strong>6.2 Writing:</strong> Communicates thoughts, ideas and messages through the completion of workbook assignments.</td>
<td><strong>7.3 Problem Solving:</strong> Through course work; identifies problems that exist, reasons for discrepancies, and implements plan of action for resolution of the problem.</td>
<td><strong>8.2 Self Esteem:</strong> Leaves course with confidence in the ability to demonstrate knowledge of pharmaceutical dosage forms and how they are applied to a patient's diagnosis.</td>
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<tr>
<td><strong>6.5 Listening:</strong> Student will listen from lectures, and respond utilizing both verbal and nonverbal communication. Student will critically analyze information presented in classroom for clarity and accuracy.</td>
<td><strong>7.4 Mental Visualization:</strong> Understand the importance of the flow of work that can occur daily in a medical office.</td>
<td><strong>8.4 Self-Management:</strong> Assess own knowledge, skills, and abilities accurately through completion of course work assignments.</td>
</tr>
<tr>
<td><strong>6.6 Speaking:</strong> Organizes ideas for presentation and communicates thoughts orally.</td>
<td><strong>7.6 Reasoning:</strong> Uses logic to understand the underlying relationship between two or more medications and applies it to the patient's medical history.</td>
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</tbody>
</table>
SCANS COMPETENCIES

SCANS COMPETENCIES WITH DEFINITIONS

1.0 RESOURCES
- 1.1 Manages Time: Selects relevant, goal-related activities, ranks them in order of importance, allocates time to activities, and understands, prepares, and follows schedules.
- 1.2 Manages Money: Uses or prepares budgets, including making cost and revenue forecasts, keeps detailed records to track budget performance, and makes appropriate adjustments.
- 1.3 Manages Materials and Facility Resources: Acquires, stores, and distributes materials, supplies, parts, equipment, space, or final products in order to make the best use of them.
- 1.4 Manages Human Resources: Assesses knowledge and skills and distributes work accordingly, evaluates performance, and provides feedback.

2.0 INTERPERSONAL
- 2.1 Participates as a Member of a Team: Works cooperatively with others and contributes to group with ideas, suggestions, and effort.
- 2.2 Teaches Others: Helps others to learn.
- 2.3 Serves Clients/Customers: Works and communicates with clients and customers to satisfy their expectations.
- 2.4 Exercises Leadership: Communicates thoughts, feelings, and ideas to justify a position, encourages, persuade, convinces, or otherwise motivates an individual or groups; including responsibility challenging existing procedures, policies, or authority.
- 2.5 Negotiates: Works toward an agreement that may involve exchanging specific resources or resolving divergent interests.
- 2.6 Works with Cultural Diversity: Works well with men and women and with a variety of ethnic, social, or educational backgrounds.

3.0 INFORMATION
- 3.1 Acquires and Evaluates Information: Identifies need for data, obtains it from existing sources or creates it and evaluates its relevance and accuracy.
- 3.2 Organizes and Maintains Information: Organizes, processes, and maintains written or computerized reports in a systematic fashion.
- 3.3 Uses Computers to Process Information: Employs computers to acquire, organize, analyze, and communicate information.

4.0 SYSTEMS
- 4.1 Understands Systems: Knows how social, organizational, and technological systems work and operates effectively within them.
- 4.2 Monitors and Corrects Performance: Distinguishes trends, predicts impact of actions on system operations, diagnoses deviations in the function of a system/organization, and takes necessary action to correct performance.
- 4.3 Improves and Designs Systems: Makes suggestions to modify existing systems to improve products or services, and develops new or alternative systems.

5.0 TECHNOLOGY
- 5.1 Selects Technology: Judges which set of procedures, tools, or machines, including computers and their programs will produce the desired results.
- 5.2 Applies Technology to Task: Understands the overall intent and the proper procedures for setting up and operating machines, including computers and their programming systems.
5.3 Maintains and Troubleshoots Technology: Prevents, identifies, or solves problems in machines, computers and other technologies.

SCANS FOUNDATION SKILLS

6.0 BASIC SKILLS

- 6.1 Reading: Locates, understands, and interprets written information in prose and documents – including manuals, graphs, and schedules to perform tasks. Learns from text by determining the main idea or essential message; identifies relevant details, facts, and specifications: infers or locates the meaning of unknown or technical vocabulary, and judges the accuracy, appropriateness, style, and plausibility of reports, proposals, or theories of other writers.

- 6.2 Writing: Communicates thoughts, ideas, information, and messages in writing; records information completely and accurately; composes and creates documents such as letters, directions, manuals, reports, proposals, graphs, flow charts; uses language, style, organization, and format appropriate to the subject-matter, purpose, and audience. Includes supporting documentation and attends to level of detail; checks, edits, and revises for correct information, appropriate emphasis, form, grammar, spelling, and punctuation.

- 6.3 Arithmetic: Performs basic computations; uses basic numerical concepts such as whole numbers and percentages in practical situations; makes reasonable estimates of arithmetic results without a calculator, and uses tables, graphs, diagrams, and charts to obtain or convey quantitative information.

- 6.4 Mathematics: Approaches practical problems by choosing appropriately from a variety of mathematical techniques; uses quantitative data to construct logical explanations for real world situations; expresses mathematical ideas and concepts orally and in writing; and understands the role of chance in the occurrence and prediction of events.

- 6.5 Listening: Receives, attends to, interprets, and responds to verbal messages and other cues such as body language in ways that are appropriate to the purpose; for example, to comprehend; to learn, to critically evaluate; to appreciate, or to support the speaker.

- 6.6 Speaking: Organizes ideas and communicates oral messages appropriate to listeners and situations; participates in conversation, discussion and group presentations; selects an appropriate medium for conveying a message; uses verbal language and other cues such as body language appropriate in style, tone, and level of complexity to the audience and the occasion; speaks clearly and communicates a message; understands and responds to listener feedback; and asks questions when needed.

7.0 THINKING SKILLS

- 7.1 Creative Thinking: Uses imagination freely, combines ideas or information in new ways, makes connections between seemingly unrelated ideas, and reshapes goals in ways that reveal new possibilities.

- 7.2 Decision Making: Specifies goals and constraints, generates alternatives, considers risks and evaluates and chooses best alternatives.

- 7.3 Problem Solving: Recognizes that a problem exists (i.e., there is a discrepancy between what is and what should or could be), identifies possible reasons for the discrepancy, and devises and implements a plan of action to resolve it. Evaluates and monitors progress, and revises plan as indicated by findings.

- 7.4 Mental Visualization: Organizes and processes symbols, pictures, graphs, objects, or other information; for example, sees a building from a blueprint, a system’s operation from schematics, the flow of work activities from narrative descriptions, or the taste of food from reading a recipe.

- 7.5 Knowing How To Learn: Recognizes and can use learning techniques to apply and adapt new knowledge and skills in both familiar and changing situations. Involves being aware of learning tools such as personal learning styles (visual, aural, etc.), formal learning strategies (note taking or clustering items that share some characteristics), and informal learning strategies (awareness of unidentified false assumptions that may lead to faulty conclusions).

- 7.6 Reasoning: Discovers a rule or principle underlying the relationship between two or more objects and applies it in solving a problem. For example, uses logic to draw conclusions from available information, extracts rules or principles from a set of objects or written text; applies rules and principles to a new situation, or determines which conclusions are correct when given a set of facts and a set of conclusions.

8.0 PERSONAL QUALITIES

- 8.1 Responsibility: Exerts a high level of effort and perseverance towards goal attainment. Works hard to become excellent at doing tasks by setting high standards. Works hard to become excellent at doing tasks
by setting high standards, paying attention to details, working well and displaying a high level of concentration even when assigned an unpleasant task. Displays high standards of attendance, punctuality, enthusiasm, vitality, and optimism in approaching and completing tasks.

- **8.2 Self-Esteem**: Believes in own self-worth and maintains a positive view of self; demonstrates knowledge of own skills and abilities; is aware of impact on others; and knows own emotional capacity and needs and how to address them.

- **8.3 Sociability**: Demonstrates understanding, friendliness, adaptability, empathy, and politeness in new and ongoing group settings. Asserts self in familiar and unfamiliar social situations; relates well to others; responds appropriately as the situation requires; and takes an interest in what others say and do.

- **8.4 Self-Management**: Assesses own knowledge, skills, and abilities accurately; sets well-defined and realistic personal goals, monitors progress goal attainment and motivates self through goal achievement; exhibits self-control and responds to feedback unemotionally and non-defensively, is a “self-starter.”

- **8.5 Integrity/Honesty**: Can be trusted. Recognizes when faced with making a decision or exhibiting behavior that may break with commonly held personal or societal values; understands the impact of violating these beliefs and codes on an organization, self, and others; and chooses an ethical course of action.

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### Career and Technical Education Competency Fulfillment SCANS

<table>
<thead>
<tr>
<th>Institutional Goals</th>
<th>Competency Outcome</th>
<th>SCANS Competency</th>
<th>Strategies</th>
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<tbody>
<tr>
<td><strong>Communication</strong></td>
<td>Comprehend various types of written and spoken information.</td>
<td>Section 2.5 Negotiate to arrive at decisions</td>
<td>Compose and create documents such as letters, directions, manuals, reports, graphs and flow charts; use language, style, organization, and format appropriate to the subject matter, purpose, and audience</td>
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<td>Create oral and written works that utilize research, organization, and proper editing.</td>
<td>Section 2.2 Teach others</td>
<td>Select information to be communicated; identify best methods for research, organizations, and delivery; communicate results to others in desired format</td>
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<td>Evaluate the oral and written communication of others.</td>
<td>Section 2.1 Participate as a member of a team</td>
<td>Contribute to group ideas, suggestions, and efforts</td>
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<tr>
<td><strong>Critical Thinking</strong></td>
<td>Embrace methods for applying both qualitative and quantitative skills for analytical purposes.</td>
<td>Section 3.2 Organize and maintain information</td>
<td>Organize and process symbols, pictures, graphs, objects or other information to visualize actual representation; evaluate qualitative and quantitative data for implementation.</td>
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<td>Use problem solving strategies to address an identified task.</td>
<td>Section 4.1 Acquire and evaluate information</td>
<td>Recognize a problem exists; identify possible reasons for the problem, devise and implement a plan of action to resolve the problem, monitor the progress, revise plans, select and apply problem solving methods.</td>
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<td>Evaluate arguments and construct alternative strategies.</td>
<td>Section 5.1 Select appropriate technology</td>
<td>Determine the desired results or outcomes and applicable constraints of technology; visualize the necessary methods and applicable technology</td>
</tr>
<tr>
<td><strong>Computer Literacy</strong></td>
<td>Use computers to create, modify, retrieve, store, and output files.</td>
<td>Section 6.1 Process information using a computer</td>
<td>Communicate information using email, list servers, word processor, or other computer based communication functions</td>
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<tr>
<td></td>
<td>Use the internet to send or receive information.</td>
<td>Section 6.1 Process information using computer</td>
<td>Work with men and women, and a variety of ethnic, social, and educational backgrounds; compare one’s own culture to and that of others; respect the rights of others while helping them make cultural adjustments when necessary</td>
</tr>
<tr>
<td><strong>Cultural Awareness</strong></td>
<td>Interpret other cultures based on a broader world view.</td>
<td>Section 2.6 Work with cultural diversity</td>
<td>Base impression upon individual performance, not stereotypes</td>
</tr>
<tr>
<td></td>
<td>Display an openness to different viewpoints.</td>
<td>Section 2.6 Work with cultural diversity</td>
<td>Understand concerns of members of other ethnic and gender groups</td>
</tr>
<tr>
<td><strong>Educational Self Reliance</strong></td>
<td>Utilize student services available at college setting.</td>
<td>Section 1.3 Manage material and facility resources effectively</td>
<td>Understand the processes associated with educational systems; utilize the necessary offices, and/or resources for educational matriculation</td>
</tr>
<tr>
<td></td>
<td>Promote his or her educational success.</td>
<td>Section 1.1 Manage time effectively</td>
<td>Manage time, finances and other resources for educational pursuit effectively</td>
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<td>Enhance his or her quality of life.</td>
<td>Section 8.1 Act responsibly</td>
<td>Persue toward goal attainment with high level of effort; maintain a positive attitude of self and believe in own self-worth</td>
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<td>Develop the capacity for life-long learning.</td>
<td>Section 7.5 Apply learning strategies to support life-long learning</td>
<td>Apply and adapt existing and new knowledge and skills, using learning techniques, in both familiar and changing situations</td>
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</tbody>
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