Brookes College

Pharmacy Assistant Diploma

Course Curriculum: Pharmacy Systems Management & Inventory Control

Brookes College – Pharmacy Assistant Diploma Program
Pharmacy Systems Management & Inventory Control
Course Curriculum

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Course Syllabus: Pharmacy Systems Management & Inventory Control

Course Description:

This introductory course equips students with the fundamental knowledge and skills essential for employment in a retail pharmacy setting with a focus on inventory management. Through a blend of theory and hands-on practice in a simulated pharmacy laboratory, students will gain proficiency in the Kroll Pharmacy system and accurate prescription data entry.

Course Duration:

- 60 hours
- 4 weeks
- 15 hours per week
- 7.5 hours online synchronous instruction per week
- 7.5 hours online self-directed learning per week

Course Goals:

- To provide a comprehensive understanding of pharmacy systems management within a retail context.
- To enable students to effectively utilize the Kroll Pharmacy system for prescription processing and inventory management.
- To develop students' proficiency in precise prescription data entry.
- To instill inventory control principles aimed at optimizing stock levels and minimizing wastage.
- To enhance students' communication skills for interactions with both customers and pharmacy team members.

Course Format:

- **L**ectures, readings, multimedia materials, and case studies.
- Interactive discussions and group activities to encourage engagement.
- Guest speakers from the healthcare field to provide real-world insights.
- Weekly assignments to apply theoretical knowledge to practical scenarios.

Course Outcomes: By the end of this course, students will be able to:

- Understand the fundamentals of pharmacy systems management and its role in retail settings.
- Utilize the Kroll Pharmacy system for prescription processing and inventory management.
- Demonstrate proficiency in accurate prescription data entry.

- Apply inventory control principles to optimize stock levels and minimize wastage.
- Develop effective communication skills to interact with customers and pharmacy team members.

Textbook: e-texts have Power Point slides, Instructor manual, tests, and test banks to support instructional delivery:

- Pharmacy Management: Essentials for All Practice Settings, 4e
- Authors: David P. Zgarrick, Greg L. Alston, Leticia R. Moczygemba, Shane P. Desselle
- Publisher: McGraw-Hill Education Year: 2020
- ISBN 978-0-07-184543-4

Course Outline:

Week 1: Introduction to Pharmacy Systems Management

- Overview of retail pharmacy operations and the significance of effective systems management.
- Roles and responsibilities of pharmacy team members in relation to inventory control.
- Introduction to the Kroll Pharmacy system and its features.

Week 2: Prescription Data Entry

- Understanding prescription terminology and components.
- Hands-on training in using the Kroll Pharmacy system for prescription data entry.
- Addressing common challenges in prescription processing.

Week 3: Inventory Control and Stock Management

- Principles of inventory control: stock rotation, shelf-life management, and reorder points.
- Techniques for maintaining accurate inventory records.
- Strategies to minimize stockouts and overstock situations.

Week 4: Simulated Pharmacy Laboratory Practice

- Practical exercises using the Kroll Pharmacy system to process prescriptions.
- Simulated scenarios involving prescription data entry and inventory management.
- Role-playing interactions with customers to enhance communication skills.

Assessment and Review:

- Participation: 10%
- Weekly Assignments: 40%

- Midterm Assessment: 20%
- Final Assessment: 30%

Grading Scale:

Percentage Range	Letter Grade	Grade Points	Description
90 – 100	A+	4.0	**Excellent (4)**
85 – 89	A	4.0	
80 – 84	A-	3.7	
77 – 79	B+	3.3	**Proficient (3)**
73 – 76	B	3.0	
70 – 72	B-	2.7	
67 – 69	C+	2.3	**Competent (2)**
63 – 66	C	2	
60 – 62	C-	1.7	
55 – 59	D+	1.3	
50 – 54	**D**	**1.0**	**Developing (1)**
0 – 49	F	0.0	**Not Evident (0)**

Important Dates:

- Midterm Examination: [Date]
- Final Project Presentation: [Date]
- Final Examination: [Date]

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Module Plans: Pharmacy Systems Management & Inventory Control

Course Duration:

- 60 hours
- 4 weeks
- 15 hours per week
- 7.5 hours of online synchronous learning per week
- 7.5 hours of online self-directed learning per week

Course Description:

This course focuses on Pharmacy Systems Management and Inventory Control. It covers topics related to pharmacy operations, prescription processing, inventory management, and communication in retail settings. The course is designed to provide students with the knowledge and skills necessary to work effectively in a pharmacy environment.

Course Format:

The course consists of a combination of synchronous online instruction and self-directed learning. Synchronous instruction includes lectures, discussions, and interactive activities. Self-directed learning involves reading assignments, quizzes, online research, and discussions. Adjustments to session duration and content may be needed based on the course requirements and scheduling preferences.

Textbook: e-texts have Power Point slides, Instructor manual, tests, and test banks to support instructional delivery:

- Pharmacy Management: Essentials for All Practice Settings, 4e
- Authors: David P. Zgarrick, Greg L. Alston, Leticia R. Moczygemba, Shane P. Desselle
- Publisher: McGraw-Hill Education Year: 2020
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Module Outlines:

Week 1: Foundations of Pharmacy Practice and Management

Learning Outcomes: By the end of this session, students will be able to:

- Understand the course objectives and its relevance to modern pharmacy practice.
- Identify key milestones in the historical development of pharmacy.
- Evaluate the role of pharmacy in contemporary healthcare.
- Comprehend the fundamentals of pharmacy laws, regulations, and regulatory agencies.
- Analyze ethical dilemmas commonly encountered in pharmacy practice.

- Apply ethical principles to real-world pharmacy scenarios and decisions.

Session 1: Introduction and History of Pharmacy

Synchronous Instruction: 2 hours

Topics:

- Introduction to the course and its objectives.
- Key milestones in the history of pharmacy.

Activities:

- Group discussion on the role of pharmacy in modern healthcare.
- Research and present a historical pharmacy figure.

Self-Directed Learning: 2 hours

Activities:

- Read relevant textbook chapters on pharmacy history.
- Prepare a brief report on the historical figure researched during the synchronous session.

Assessment:

- Online quiz on historical pharmacy milestones.

Session 2: Pharmacy Law, Ethics, and Regulatory Agencies

Synchronous Instruction: 2 hours

Topics:

- Overview of pharmacy laws, regulations, and regulatory agencies.
- Ethical dilemmas in pharmacy practice.

Activities:

- Case study analysis of ethical scenarios in pharmacy.

Self-Directed Learning: 2 hours

Activities:

- Read relevant textbook chapters on pharmacy laws and ethics.
- Conduct online research on a current pharmacy regulation.

Assessment:

- Research paper on a current pharmacy regulation.

Week 2: Communication, Dosage Forms, and Drug Information

Learning Outcomes**:** By the end of this module, students will be able to:

- Identify the essential competencies required for pharmacy technicians.
- Develop effective communication techniques for interactions with patients and colleagues.
- Demonstrate empathetic communication skills through role-playing exercises.
- Differentiate between various dosage forms and their characteristics.
- Perform conversions and calculations necessary for pharmacy practice.
- Solve practical dosage calculation problems accurately and efficiently.

Session 1: Competencies and Communication Skills

Synchronous Instruction: 2 hours

Topics:

- Required competencies for pharmacy technicians.
- Techniques for clear and empathetic communication.

Activities:

- Role-playing exercises for effective patient communication.

Self-Directed Learning: 2 hours

Activities:

- Read relevant textbook chapters on pharmacy competencies and communication.
- Practice communication skills in various scenarios.

Assessment:

- Communication skills assessment in a simulated pharmacy setting.

Session 2: Dosage Forms and Calculations

Synchronous Instruction: **2 hours**

Topics:

- Types of dosage forms and their characteristics.
- Conversions and calculations in pharmacy practice.

Activities:

- Practical dosage calculation problems in class.

Self-Directed Learning: 2 hours

Activities:

- Read relevant textbook chapters on dosage forms and calculations.
- Practice dosage calculation problems independently.

Assessment:

- Online dosage calculation exam.

Week 3: Pharmacology, Medications, and Medication Safety

Learning Outcomes: By the end of this session, students will be able to:

- Explore and utilize various drug information references effectively.
- Understand dispensing procedures and patient interactions specific to community pharmacy.
- Locate reliable drug information sources through an online scavenger hunt.
- Categorize drugs based on their classifications and nomenclature.
- Examine therapeutic agents relevant to the gastrointestinal and musculoskeletal systems.
- Demonstrate knowledge of drug classifications and agents through interactive quizzes.

Session 1: Drug Information References and Community Pharmacy

Synchronous Instruction: 2 hours

Topics:

- Exploring drug information references and their applications.
- Dispensing procedures and patient interactions in community pharmacy.

Activities:

- Online scavenger hunt for reliable drug information sources.

Self-Directed Learning: 2 hours

Activities:

- Read relevant textbook chapters on drug information references and community pharmacy procedures.
- Conduct research on a specific drug information reference.

Assessment:

- Drug information research project.

Session 2: Pharmacology and Therapeutic Agents

Synchronous Instruction: 2 hours

Topics:

- Introduction to drug classifications and nomenclature.
- Therapeutic agents for the gastrointestinal and musculoskeletal systems.

Activities:

- Interactive quiz on drug classifications and agents.

Self-Directed Learning: 2 hours

Activities:

- Read relevant textbook chapters on drug classifications and therapeutic agents.
- Prepare a presentation on a specific therapeutic agent.

Assessment:

- Deliver a therapeutic agents presentation.

Week 4: Inventory Management, Compounding, and Specialized Practices

Learning Outcomes: By the end of this session, students will be able to:

- Interpret billing processes, insurance claims, and third-party payer systems.
- Implement inventory control techniques to minimize wastage.
- Analyze sample insurance claim scenarios and propose solutions.
- Identify and prevent medication errors through safety measures.
- Apply techniques for bulk repackaging and non-sterile compounding.
- Collaborate with peers to discuss strategies for reducing medication errors.

Session 1: Pharmacy Billing and Inventory Management

Synchronous Instruction: 2 hours

Topics:

- Billing processes, insurance claims, and third-party payers.

- Inventory control techniques and minimizing wastage.

Activities:

- Analyzing sample insurance claim scenarios.

Self-Directed Learning: 2 hours

Activities:

- Read relevant textbook chapters on pharmacy billing and inventory management.
- Research and propose an inventory management optimization strategy.

Assessment:

- Inventory management optimization proposal.

Session 2: Medication Safety and Compounding Techniques

Synchronous Instruction: 2 hours

Topics:

- Identifying medication errors and implementing safety measures.
- Techniques for bulk repackaging and non-sterile compounding.

Activities:

- Group discussion on reducing medication errors.

Self-Directed Learning: 2 hours

Activities:

- Read relevant textbook chapters on medication safety and compounding techniques.
- Participate in online discussions on medication safety strategies.

Assessment:

- Medication safety and compounding case study presentation.

Assessment and Review:

- Weekly quizzes and assignments (40%)
- Mid-term exam (20%)
- Final exam (30%)
- Participation in synchronous and asynchronous sessions (10%)Top of Form

Sample Lesson Plan: Medication Safety and Compounding Techniques

Lesson Duration:

- 3.75 - 4 hours
- 2 hours online synchronized instruction
- 2 hours of online self-directed learning

Learning Outcomes: By the end of this lesson, students will be able to:

1. Understand the significance of medication safety in pharmacy practice.
2. Identify strategies to prevent medication errors and ensure patient safety.
3. Explore the concepts of bulk repackaging and non-sterile compounding.

Textbook: e-texts have Power Point slides, Instructor manual, tests, and test banks to support instructional delivery:

- Pharmacy Management: Essentials for All Practice Settings, 4e
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Materials:

- Access to the online learning platform, interactive e-learning modules, case studies, self-assessment quizzes.

Lesson Outline:

Introduction

Online Synchronous Instruction (2 hours)

Topic 1: Introduction to Medication Safety

- Definition and importance of medication safety.
- Consequences of medication errors.
- Role of pharmacy technicians in preventing errors.

Topic 2: Strategies for Medication Safety

- Discussion on error-prone abbreviations, look-alike/sound-alike drugs.
- Introduction to the "Five Rights" of medication administration.

- Case studies on medication error scenarios and their prevention.

Topic 3: Bulk Repackaging and Non-Sterile Compounding

- Explanation of bulk repackaging and its purpose.
- Techniques for accurate bulk repackaging.
- Introduction to non-sterile compounding, applications, and examples.

Activities

Group Activity: Case Study Analysis

- Divide participants into groups.
- Provide a medication error case study.
- Groups discuss and present how the error could have been prevented.

Break

Self-Directed Learning (2 hours)

Topic 4: Review of Medication Safety Strategies

- Participants review the strategies discussed during the online lesson.
- Engage in a self-assessment quiz on medication safety.

Topic 5: Interactive e-Learning Modules on Bulk Repackaging

- Participants access online modules with step-by-step visuals.
- Virtual bulk repackaging simulation.
- Assessment quiz to reinforce understanding.

Topic 6: Interactive e-Learning Modules on Non-Sterile Compounding

- Participants engage with interactive modules on non-sterile compounding.
- Practice non-sterile compounding calculations.
- Self-assessment exercises to gauge knowledge retention.

Assessment

Final Self-Assessment and Reflection

- Participants complete a self-assessment quiz on both bulk repackaging and non-sterile compounding.
- Reflect on their learning and areas for improvement.

Conclusion and Recap

Homework Assignment:

- Review medication safety guidelines and make a list of three best practices to prevent medication errors.

Learning Outcomes Review**:**

- Summarize the key points of medication safety.
- Identify strategies to prevent medication errors.
- Understand bulk repackaging and non-sterile compounding concepts.

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Course Rubric: Pharmacy Systems Management & Inventory Control

Week 1: Foundations of Pharmacy Practice and Management

Assessment Criteria	Excellent (4)	Proficient (3)	Competent (2)	Developing (1)	Not Evident (0)
Participation	Consistently active in discussions and actively engaged in activities.	Active in discussions and engaged in activities most of the time.	Participated but often lacked engagement or contribution.	Rarely participated or contributed minimally.	No participation.
Online Quiz on Historical Pharmacy Milestones	90-100% correct answers.	80-89% correct answers.	70-79% correct answers.	60-69% correct answers.	Below 60% correct answers.
Research Paper on Current Pharmacy Regulation	Exceptional research and analysis. Demonstrates a deep understanding.	Good research and analysis. Demonstrates a clear understanding.	Adequate research and analysis. Demonstrates some understanding.	Limited research and analysis. Demonstrates little understanding.	Insufficient research and analysis. Demonstrates no understanding.

Week 2: Communication, Dosage Forms, and Drug Information

Assessment Criteria	Excellent (4)	Proficient(3)	Competent (2)	Developing (1)	Not Evident(0)
Participation	Consistently active in role-playing exercises and engaged in activities.	Active in role-playing exercises and engaged in activities most of the time.	Participated but often lacked engagement or contribution.	Rarely participated or contributed minimally.	No participation.
Communication Skills Assessment	Exceptional communication skills in a simulated pharmacy setting.	Good communication skills in a simulated pharmacy setting.	Adequate communication skills in a simulated pharmacy setting.	Limited communication skills in a simulated pharmacy setting.	Inadequate communication skills in a simulated pharmacy setting.
Online Dosage Calculation Exam	90-100% correct answers.	80-89% correct answers.	70-79% correct answers.	60-69% correct answers.	Below 60% correct answers.

Week 3: Pharmacology, Medications, and Medication Safety

Assessment Criteria	Excellent (4)	Proficient (3)	Competent (2)	Developing (1)	Not Evident (0)
Participation	Actively engaged in online scavenger hunt and discussions.	Engaged in online scavenger hunt and discussions most of the time.	Participated but often lacked engagement or contribution.	Rarely participated or contributed minimally.	No participation.
Drug Information Research Project	Exceptional research and utilization of drug information references.	Good research and utilization of drug information references.	Adequate research and utilization of drug information references.	Limited research and utilization of drug information references.	Inadequate research and utilization of drug information references.
Therapeutic Agents Presentation	Excellent presentation with comprehensive coverage and accurate information.	Good presentation with clear information.	Satisfactory presentation with some gaps or inaccuracies.	Presentation lacks clarity and accuracy.	Inadequate presentation.

Week 4: Inventory Management, Compounding, and Specialized Practices

Assessment Criteria	Excellent (4)	Proficient(3)	Competent (2)	Developing (1)	Not Evident(0)
Participation	Actively engaged in analyzing sample insurance claim scenarios and group discussions.	Engaged in activities most of the time.	Participated but often lacked engagement or contribution.	Rarely participated or contributed minimally.	No participation.
Inventory Management Optimization Proposal	Exceptional analysis and proposal for inventory management.	Good analysis and proposal for inventory management.	Adequate analysis and proposal for inventory management.	Limited analysis and proposal for inventory management.	Inadequate analysis and proposal for inventory management.

Medication Safety and Compounding Case Study Presentation	Excellent presentation with comprehensive coverage and accurate information.	Good presentation with clear information.	Satisfactory presentation with some gaps or inaccuracies.	Presentation lacks clarity and accuracy.	Inadequate presentation.

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