Department of Practical Nurse and Health Care Aide

COURSE OUTLINE – Winter 2024

NP1480 (2): Medication Administration – 2 (1-2-0) 45 Hours for 15 Weeks

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

INSTRUCTOR:
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OFFICE HOURS:
By appointment

CALENDAR DESCRIPTION:

Development of mathematics for practical nursing practice. Focus is on calculating dosages for medication administration for clients across the lifespan.
Note: Available only to Practical Nursing students.

PREREQUISITE(S) Mathematics 20-2 or equivalent, NP1205, NP1250, NP1280, NP1500
COREQUISITE(S): NP1400, NP1410, NP1450, NP1600

REQUIRED TEXT/RESOURCE MATERIALS:

Elsevier Adaptive Quizzing (EAQ) 4th edition Next Gen, is available for purchase through the NWP Polytechnic bookstore. This is a required online resource. The EAQ will assist students with preparing to write the CPNRE registration exam. This resource will provide students with a 24-month online review/prep course to use as they progress through the PN program.

Killian, T. (2022). *Gray Morris's Calculate with Confidence, Canadian Edition* (2nd ed.). Elsevier Health Sciences.

Sealock, K., Seneviratne, C., Lilley L. L., & Snyder, J. S. (2021). *Lilley's Pharmacology for Canadian Health Care Practice* (4th ed.). Elsevier Health Sciences.

Sealock, K., & Seneviratne, C. (2021). *Study Guide for Lilley's Pharmacology for Canadian Health Care Practice* (4th ed.). Elsevier Health Sciences.

NORTHWESTERN POLYTECHNIC

DELIVERY MODE(S): In-person Lecture and seminar

LEARNING OUTCOMES:

Upon successful completion of NS1480 learners will be able to:

1. Calculate accurate medication doses.
2. Identify policies and procedures for medication administration.
3. Identify and discuss the 10 rights of medication administration.
4. Discuss medication error disclosure requirements.
5. Discuss professional development and continuing competence.

CLPNA COMPETENCIES:

A-Nursing Knowledge

C-Professionalism and Leadership

U-Medication Management

V-Infusion Therapy

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page http://www.transferalberta.alberta.ca

** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions.

Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability.

EVALUATIONS:

All evaluation components of the course must be completed PRIOR TO being permitted to write the final exam.

Assignment	Weight	Date	Related Course Learning Outcome
Ticket to Class	25%	Each Seminar & Lecture	1, 2, 3, 4, 5
Weekly Quizzes	20%	Each Week	1, 2, 3, 4, 5
Midterm Exam	25%	Week 9	1, 2, 3, 4, 5
Final Exam	30%	In Exam Week	1, 2, 3, 4, 5

1. **Ticket to Class (1% each class; 25% total course grade)**

   Each Lecture and Seminar (2 opportunities/week) will include Ticket to Class questions to be completed upon entering the classroom. This exercise aims to encourage students to keep up with class readings, refresh student memory of subject matter and prepare students to engage in class discussion. Ticket to Class sheets will be submitted within the class after the allotted time, following which no further submissions will be allowed. Students must be in attendance each week to receive the sheet and grade.

2. **Weekly Quizzes (Divided evenly amongst quizzes to total 20% of final grade)**

   The purpose of the weekly quizzes is to ensure students grasp the math skills needed each week before progressing to increasing difficulty in math calculations and problems.

3. **Midterm Exam (weighted 25% of final grade)**

   The midterm exam includes all content covered up to and including Week 9. Question format includes a variety of styles including, but not limited to, multiple choice, short answer, long answer, matching, and select all that apply.

4. **Final Exam (weighted 30% of final grade)**

   The final exam is cumulative and includes all content covered throughout the course. Question format includes a variety of styles including, but not limited to, multiple choice, short answer, long answer, matching, and select all that apply. Scheduling of the final exam is set by the Registrar's Office.

NORTHWESTERN POLYTECHNIC

GRADING CRITERIA: Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	95-100	C+	2.3	67-69
A	4.0	85-94	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

PROGRESSION CRITERIA

Academic Progression Criteria

A grade of C- is the minimum passing grade for all Practical Nursing courses in the program. For promotion from term to term in the program and for graduation, students must have successfully completed all the required Practical Nursing and non-Practical Nursing courses of the previous term.

A student with a GPA of 1.69 or lower must withdraw from the Practical Nursing program. Readmission to the program is subject to departmental review.

Students who withdraw or fail twice from a required practical nursing course will be withdrawn from the program and ineligible for re-admission.

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week	Topic	Purpose and Learning Outcomes	Resources
Week 1	Medication Administration (10 Rights of Medication Administration)	The purpose of this unit is to understand medication administration. Learning Outcomes: 1. State all 15 Rights of Medication Administration. 2. Identify the role of the	Chapter 8

		nurse in preventing medication errors.	
Week 2	Understanding & Interpreting Medication Orders	The purpose of this unit is to read and comprehend a medication order. Learning Outcomes: 1. Identify the components of an order. 2. Identify the meaning of standard abbreviations used in medication administration.	Chapter 9
Week 3	Medication Documentation & Reading Medication Labels	The purpose of this unit is to understand medication documentation. Learning Outcomes: 1. Identify the necessary components of a Medication Administration Record (MAR) 2. Identify generic and trade names of medications	Chapters 10, 11
Week 4	Math Review (Fractions, Decimals, Ratio & Percentages)	The purpose of this unit is to understand and demonstrate math calculation in medication administration. Learning Outcomes: 1. Calculate medication problems using ratio and proportions.	Chapters 1,2, 3, 4
Week 5	Systems of Measurement & Conversions	The purpose of this unit is to explore different systems of measurement and conversion. Learning Outcomes:	Chapters 5, 6, 7

		1. Convert a unit from one system of measurement to its equivalent in another system of measurement. 2. Convert between units of weight.	
Week 6	Dosage Calculation Methods	The purpose of this unit is to explore and understand how to correctly calculate doses. Learning Outcomes: 1. Solve simple calculations using the ratio and proportion methods. 2. Calculate the volume of medication in a solution to administer using the formula method.	Chapters 12, 13, 14
Week 7	Winter Break		
Week 8	Oral and Parenteral Dosage Forms	The purpose of this unit is to develop an understanding of oral and parental doses. Learning Outcomes: 1. Identify the correct information on an oral medication label to be used in calculating doses. 2. Apply the principles of tablet and liquid preparation to obtain logical dosage.	Chapters 15, 16, 17, 18

Week 9	Midterm Exam		
Week 10	Insulin	The purpose of this unit is to understand the principles of Insulin administration. Learning Outcomes: 1. Identify the various methods of insulin administration 2. Measure insulin in single and combined doses.	Chapter 18
Week 11	Intravenous	The purpose of this unit is to understand the administration of intravenous medications. Learning Outcomes: 1. Identify terminology associated with intravenous therapy. 2. Identify best practices to prevent IV administration errors.	Chapters 19, 20
Week 12	Heparin Calculations	The purpose of this unit is to understand the administration of heparin. Learning Outcomes: 1. State the importance of calculation heparin accurately 2. Calculate safe heparin doses based on weight.	Chapter 21
Week 13	Calculating Dosage Based on Weight	The purpose of this unit is to understand the importance of weight based calculations. Learning Outcomes: 1. Calculate safe dosage	Chapter 22

		ranges and determine whether a dosage for IV administration is within normal range. 2. Calculate fluid resuscitation for burn patients.	
Week 14	Review		All course resources
Week 15	Final Exam		TBA

***Subject to change**

STUDENT RESPONSIBILITIES:

Refer to NWP Academic Policies https://www.nwpolytech.ca/about/administration/policies/

For policies related to clinical absences, immunizations, uniforms, and other clinical requirements please see the NWP Department of Nursing Education & Health Studies PN Student Handbook on Myclass.

STATEMENT ON ACADEMIC MISCONDUCT:

Academic Misconduct will not be tolerated. For a more precise definition of academic misconduct and its consequences, refer to the Student Rights and Responsibilities policy available at https://www.nwpolytech.ca/about/administration/policies/index.html.

**Note: all Academic and Administrative policies are available on the same page.

Additional Information:

Late Assignment Policy:

To obtain credit in the course ALL assignments, examinations, and quizzes must be completed. Students are expected to make every effort to complete assignments on time. Assignment submissions are expected on the date determined by faculty. If extensions are necessary, they may be requested up to 48 hours prior to the assignment due date, and should be submitted in writing to the faculty member involved for review. Not all extensions will be granted. In

exceptional situations, extension requests within the 48-hour period may be considered. Late assignments will have 5% of total marks (or one letter grade) for the assignment deducted for each day/partial day (including weekend days) beyond the due time.

For example, a paper marked at B+ would receive an adjusted grade of B if handed in one day late. After 5 days, a grade of 0 will be awarded to the assignment. Papers/assignments may not be rewritten for a higher grade. When submitting assignments electronically, it is the student's responsibility to ensure the assignment has been received. Concerns regarding grading are to be discussed with the faculty member involved.