

Nursing Education and Health Studies

COURSE OUTLINE – Spring 2023

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.

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	Lectures	Seminars
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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: NP1400, NP1410, NP1450, NP1600

REQUIRED TEXT/RESOURCE MATERIALS:

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

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

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RECOMMENDED ONLINE RESOURCE:

<https://guides.library.ualberta.ca/apa-citation-style>

DELIVERY MODE(S): 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.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**

Assignment	Weight	Date	Related Course Learning Outcome
Ticket to Class	10%	Each Seminar & Lecture	1, 2, 3, 4, 5
Weekly Quizzes	20%	Each Week	1, 2, 3, 4, 5
Case Study	15%	June 4 th , @ 2359	1, 2, 3, 4, 5
Midterm Exam	25%	June 16 th	1, 2, 3, 4, 5
Final Exam	30%	In Exam Week	1, 2, 3, 4, 5

Tentative schedule subject to change

EVALUATIONS:

1. Ticket to Class

Each Lecture and Seminar (3 opportunities/week) will include a Ticket to Class a 3-question quiz to be completed upon entering the classroom.

2. Weekly Quizzes

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

The midterm exam includes all content covered up to and including Week 7. 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. Case Study

Students will be provided with a case study where a medication error has occurred. Students must recognize the error, identify strategies for preventing the error in future practice, and complete the required medication calculations and nursing implications for reporting the error.

TOTAL = /20 marks x 15 = ____/15%

Components	(A) Excellent	(B) Very Good	(C) Good	(D) Marginal	(F) Unsatisfactory
Content /4	Correctly Identifies the error. Comprehensive identification of strategies of preventing the error in future nursing practice. Critical thinking is demonstrated by an in-depth discussion of the various nursing implications.	Error is identified. Clear and concise identification of strategies of preventing the error in future nursing practice. Critical thinking is demonstrated clearly by discussion nursing implications.	Error is identified. Satisfactory identification of strategies for prevention of error in future. Critical thinking is demonstrated sometimes by discussion of the various nursing implications.	Error is identified. Vague identification of strategies of preventing error in future. Critical thinking is vague and weak in discussion of nursing implications.	Does not provide identification the error or strategies for preventing the error in the future. Critical thinking is not demonstrated in discussion the various nursing implications.
Presentation & Organization /4	Comprehensive introduction and conclusion. Excellent organization of ideas. All information is comprehensive, clear, and concise.	Clear and concise introduction and conclusion. Very good organization of ideas. Most information is clear and concise.	Satisfactory introduction and conclusion. Ideas somewhat organized. Some information is clear, but at times superficial.	Inadequate introduction and conclusion OR fails to include introduction or conclusion. Clearly lacks organization of ideas. Most information is superficial and at times confusing.	Fails to include introduction and conclusion. Ideas entirely disorganized and/or confusing. Information is mostly confusing and/or non-existent.
Spelling & Grammar /4	No grammatical or spelling errors. Excellent use of academic and nursing language throughout paper.	Minimal grammatical or spelling errors. Very good use of academic and nursing language throughout paper.	Some grammatical and/or spelling errors. Satisfactory use of academic and nursing language throughout paper.	Several grammatical and/or spelling errors. Inadequate use of academic and nursing language throughout paper.	Copious grammatical and/or spelling errors. Failed to write paper using academic language.
APA Formatting & Referencing /4	Accurate APA formatting, referencing, and citations.	Most APA formatting, referencing, and citations accurate.	Some APA formatting, referencing, and citations errors.	Poor APA formatting, referencing, and citations.	Improper APA formatting evident.
Resources /4 <i>*Minimum of 3 resources*</i>	Excellent variety of resources used. Resources are all current, credible, and applicable.	Very good variety of resources used. Resources are mostly current, credible, and applicable.	Satisfactory variety of resources used. Resources are mostly current, credible and/or applicable.	One resource or type of resource used. Resources not current, credible, and/or applicable.	Fails to include any resources.

5. Final Exam

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.

GRADING CRITERIA: (The following criteria may be changed to suite the particular course/instructor)

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	90-100		C+	2.3	67-69
A	4.0	85-89		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
Week 1	Medication Administration (10 Rights of Medication Administration)	The purpose of this unit is to understand medication administration. Learning Outcomes: <ol style="list-style-type: none">1. State all 15 Rights of Medication Administration.2. Identify the role of the 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: <ol style="list-style-type: none">1. Identify the components of an order.2. Identify the meaning of standard abbreviations used in medication administration.
Week 3	Medication Documentation & Reading Medication Labels	The purpose of this unit is to understand medication documentation. Learning Outcomes: <ol style="list-style-type: none">1. Identify the necessary components of a Medication Administration Record (MAR)2. Identify generic and trade names of medications

Week 4	Math Review (Fractions, Decimals, Ratio & Percentages)	<p>The purpose of this unit is to understand and demonstrate math calculation in medication administration.</p> <p>Learning Outcomes:</p> <ol style="list-style-type: none"> 1. Calculate medication problems using ratio and proportions
Week 5	Systems of Measurement & Conversions Case Study Due	<p>The purpose of this unit is to explore different systems of measurement and conversion.</p> <p>Learning Outcomes:</p> <ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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.
Week 7	Midterm Exam	
Week 8	Oral and Parenteral Dosage Forms	<p>The purpose of this unit is to develop an understanding of oral and parental doses.</p> <p>Learning Outcomes:</p> <ol style="list-style-type: none"> 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.

Week 9	Insulin	<p>The purpose of this unit is to understand the principles of Insulin administration.</p> <p>Learning Outcomes:</p> <ol style="list-style-type: none"> 1. Identify the various methods of insulin administration 2. Measure insulin in single and combined doses.
Week 10	Intravenous	<p>The purpose of this unit is to understand the administration of intravenous medications.</p> <p>Learning Outcomes:</p> <ol style="list-style-type: none"> 1. Identify terminology associated with intravenous therapy. 2. Identify best practices to prevent IV administration errors.
Week 11	Heparin Calculations	<p>The purpose of this unit is to understand the administration of heparin.</p> <p>Learning Outcomes:</p> <ol style="list-style-type: none"> 1. State the importance of calculation heparin accurately 2. Calculate safe heparin doses based on weight.
Week 12	Calculating Dosage Based on Weight	<p>The purpose of this unit is to understand the importance of weight- based calculations.</p> <p>Learning Outcomes:</p> <ol style="list-style-type: none"> 1. Calculate safe dosage ranges and determine whether a dosage for IV administration is within normal range. 2. Calculate fluid resuscitation for burn patients.
Week 13	Calculating Dosage Based on Weight (Continued)	
Week 14	Review	
Week 15	Final Exam	

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 PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the NWP Calendar at <https://www.nwpolytech.ca/programs/calendar/> or the NWP Policy on Student Misconduct: Plagiarism and Cheating at <https://www.nwpolytech.ca/about/administration/policies/index.html>

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

LATE ASSIGNMENTS

To obtain credit in the course ALL assignments, examinations, and knowledge checks 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. 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. If the late penalty places the grade below the necessary pass grade, students will be unsuccessful in the course. When submitting assignments electronically, it is the student's responsibility to ensure the assignment has been received. Papers/assignments may not be rewritten for a higher grade. Concerns regarding grading are to be discussed with the faculty member involved.