



COURSE OUTLINE

NURS 1301
MATHEMATICAL PRINCIPLES OF MEDICATION
ADMINISTRATION

3 CREDITS

PREPARED BY: Sue Starks, Instructor/Coordinator Practical Nurse Program

DATE: August 21, 2020

APPROVED BY: Name, Title

DATE: Click or tap to enter a date

APPROVED BY SENATE: Click or tap to enter a date

RENEWED BY SENATE: Click or tap to enter a date

APPLIED ARTS DIVISION
NURS 1301
Mathematical Principles of Medication Administration
3 Credits
Fall, 2020

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MATHEMATICAL PRINCIPLES OF MEDICATION ADMINISTRATION

INSTRUCTOR: Samantha Piper	OFFICE HOURS:
OFFICE LOCATION:	CLASSROOM:
E-MAIL: spiper@yukonu.ca	TIME:
TELEPHONE:	DATES:

COURSE DESCRIPTION

The ability to perform dosage calculations correctly is essential to safe nursing practice. This course provides an overview of mathematical concepts and operations foundational to medication administration. The course includes a review of basic mathematics followed by an examination of measurement systems; document use and medication orders; oral and parenteral medication calculations; and calculations regarding solutions and intravenous infusions. Proficiency in this course underpins safe nursing practice.

PREREQUISITES

None

RELATED COURSE REQUIREMENTS

It is highly recommended that all students have access to a computer or other device and Internet to do their studies. The minimum specifications for a student device are as follows:

Requirement	Windows-based PC	Apple Mac/macOS-based PC
Operating System	Windows 10	macOS X
Web Browser	Firefox, Edge or Google Chrome	Firefox, Edge or Google Chrome
RAM/Memory	4 GB	4 GB
Storage	5 GB of available space	5 GB of available space

EQUIVALENCY OR TRANSFERABILITY

See Bow Valley College transferability information @ <https://bowvalleycollege.ca/student-resources/academic-services/transfer-credits>.

LEARNING OUTCOMES

Upon successful completion of the course, students will be able to...

- Perform and evaluate dosage calculations
- Perform calculations related to intravenous solutions
- Use documents related to medication administration
- Evaluate and discuss medication related issues that affect safety
- Use correct terms and notation regarding medication administration
- Evaluate and discuss medication related issues that affect safety

COURSE FORMAT

This course will include a total of 45 hours of on-line learning, videoconference classes, and quizzes/exams. A combination of synchronous (virtual real-time class meetings through Zoom) and asynchronous (web-based via Moodle) learning activities are provided. Learning activities may include but are not limited to facilitator-led learning, projects, in-class and on-line exercises.

ASSESSMENTS:

COURSE LEARNING OUTCOME(S)	ASSESSMENT	WEIGHT
1, 2, 3, 4	Learning activities	30%
1, 2, 3, 4	Exam 1	35%
1, 2, 3, 4	Exam 2	35%

Important: For details on each assignment and exam, please see your Course Offering Information.

A minimum grade of D is required to pass this course. However, your program may require a higher grade in this course for you to progress in the program or to meet your specific program completion requirements. **An overall minimum final mark for this course must**

be 80%, letter grade B+, grade point value of 3.33 to pass this course. Please consult with your program area or contact your program chair for further details.

A minimum Grade Point Average of 2.0 is required for graduation.

GRADE	PERCENTAGE	GRADE POINT	DESCRIPTION
A+	95-100	4.0	Exceptional: superior knowledge of subject matter
A	90-94	4.0	Excellent: outstanding knowledge of subject matter
A-	85-89	3.67	
B+	80-84	3.33	
B	75-79	3.0	Very Good: knowledge of subject matter generally mastered
B-	70-74	2.67	
C+	67-69	2.33	
C	64-66	2.0	Satisfactory/Acceptable: knowledge of subject matter adequately mastered
C-	60-63	1.67	
D+	57-59	1.33	
D	50-56	1.0	Minimal Pass
F	Less than 50	0.0	Fail: an unsatisfactory performance

REQUIRED TEXTBOOKS AND MATERIAL

Pickar, G. D., Abernathy, A. P., & Swart, B. (2018). *Dosage calculations* (4th Canadian ed.). Nelson.

ACADEMIC AND STUDENT CONDUCT

Information on academic standing and student rights and responsibilities can be found in the current Academic Regulations that are posted on the Student Services/ Admissions & Registration web page.

PLAGIARISM

Plagiarism is a serious academic offence. Plagiarism occurs when a student submits work for credit that includes the words, ideas, or data of others, without citing the source from which the material is taken. Plagiarism can be the deliberate use of a whole piece of work, but more frequently it occurs when students fail to acknowledge and document sources from which they have taken material according to an accepted manuscript style (e.g., APA, CSE, MLA, etc.). Students may use sources which are public domain or licensed under Creative Commons; however, academic documentation standards must still be followed. Except with explicit permission of the instructor, resubmitting work which has previously received credit is also considered plagiarism. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may also result in dismissal from a program of study or the University.

YUKON FIRST NATIONS CORE COMPETENCY

Yukon University recognizes that a greater understanding and awareness of Yukon First Nations history, culture and journey towards self-determination will help to build positive relationships among all Yukon citizens. As a result, to graduate from ANY Yukon University program, you will be required to achieve core competency in knowledge of Yukon First Nations. For details, please see www.yukonu.ca/yfnccr.

ACADEMIC ACCOMMODATION

Reasonable accommodations are available for students requiring an academic accommodation to fully participate in this class. These accommodations are available for students with a documented disability, chronic condition or any other grounds specified in section 8.0 of the Yukon University Academic Regulations (available on the Yukon University website). It is the student's responsibility to seek these accommodations. If a student requires an academic accommodation, he/she should contact the Learning Assistance Centre (LAC): lac@yukonu.ca.

TOPIC OUTLINE

Basic mathematics

Systems of measurement and conversions

Calculation methods for determining drug dosages

Dosage measurement equipment

Use of documents in medication administration

Medication orders and administration records

Medication labels

Calculating oral medication dosages

Calculating parenteral medication dosages

Reconstitution of solutions

Dosages based on body weight

Intravenous solutions, equipment, and calculations
