

 Yukon University	School of Health, Education and Human Services
	NURS 1301: Mathematical Principles of Medication Administration
	Term: Fall 2025 Number of Credits: 3
Course Outline	

INSTRUCTOR: Marta Afonso Burnay

E-MAIL: mafonsoburnay@yukonu.ca

OFFICE: N/A

TIME/DATES: Thursdays (see schedule for dates), 1:00-3:50 pm. A2406

OFFICE HOURS: TBA, please email to make an appointment.

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

Requisites: None

Equivalents: None

Credits: 3

Hours: 45

Eligible for PLAR: Yes

EQUIVALENCY OR TRANSFERABILITY

Receiving institutions determine course transferability. Find further information at:

<https://www.yukonu.ca/admissions/transfer-credit>

LEARNING OUTCOMES

1	Perform and evaluate dosage calculations
2	Perform calculations related to intravenous solutions
3	Use documents related to medication administration

4	Use correct terms and notation regarding medication administration
5	Evaluate and discuss medication related issues that affect safety

COURSE MODULES AND SCHEDULE

WEEK/HOURS MODULE

3 hours	Basic Mathematics
3 Hours	Systems of measurement and conversions
3 Hours	Calculation methods for determining drug dosages
1.5 Hours	Dosage measurement equipment
1.5 Hours	Use of documents in medication administration
3 Hours	Medication orders and administration records
3 Hours	Medication labels
6 Hours	Calculating oral medication dosages
6 Hours	Calculating parenteral medication dosages
6 Hours	Reconstitution of solutions
3 Hours	Dosages based on body weight
6 Hours	Intravenous solutions, equipment, and calculations

ASSESSMENT

Learning Outcomes	Assessment	Weight
1, 2, 3, 4, 5	Learning Activities	30%
1, 2, 3, 4, 5	Exam #1	35%
1, 2, 3, 4, 5	Exam #2	35%

An overall minimum final mark for this course must be 80%.

Please consult with the program area or contact the program chair for further details. A minimum Grade Point Average of 2.0 is required for graduation.

DELIVERY FORMAT

This course is delivered primarily in-person, though supplemented with online learning activities (possibly synchronous or asynchronous).

Note: delivery format subject to change.

COURSE WITHDRAWAL INFORMATION

Refer to the YukonU website for important dates [Important dates | Yukon University](#)

TEXTBOOKS & LEARNING MATERIALS

Pickar, G. D., Abernathy, A. P., & Swart, B., Davis, M., O'Connell, J. (2025). *Dosage Calculations (6th Canadian ed.)*. Cengage Learning Canada.

Additional learning resources may be found in the Course Offering Information and in Moodle.

ACADEMIC INTEGRITY

Students are expected to contribute toward a positive and supportive environment and are required to conduct themselves in a responsible manner. Academic misconduct includes all forms of academic dishonesty such as cheating, plagiarism, fabrication, fraud, deceit, using the work of others without their permission, aiding other students in committing academic offences, misrepresenting academic assignments prepared by others as one's own, or any other forms of academic dishonesty including falsification of any information on any Yukon University document.

Please refer to Academic Regulations & Procedures for further details about academic standing and student rights and responsibilities.

ACCESSIBILITY AND ACADEMIC ACCOMMODATION

Yukon University is committed to providing a positive, supportive, and barrier-free academic environment for all its students. Students experiencing barriers to full participation due to a visible or hidden disability (including hearing, vision, mobility, learning disability, mental health, chronic or temporary medical condition) should contact [Accessibility Services](#) for resources or to arrange academic accommodations: access@yukonu.ca.

Copyright

Care has been taken to obtain copyright permission to reproduce this material. Any information that will enable Bow Valley College to obtain copyright clearance for any material not acknowledged would gladly be received by: Bow Valley College 345 6th Avenue SE Calgary AB T2G 4V1 Attn: Copyright Officer email: copyright@bowvalleycollege.ca

© Bow Valley College