

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



COURSE OUTLINE

COURSE TITLE: IV Therapy

CODE NO. : CED1042 **SEMESTER:** 11W

PROGRAM: Professional Development – Health Sciences

AUTHOR: Janet Piper, RN, MScN

DATE: May 2011 **PREVIOUS OUTLINE DATED:** Fall 2009

APPROVED: "Laurie Poirier"

	CHAIR	DATE
TOTAL CREDITS:	2	
PREREQUISITE(S):	Graduate BScN or PN level	
HOURS/WEEK:	Condensed 3 day version: 21 hours total	

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For additional information, please contact Laurie Poirier, Chair
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I. COURSE DESCRIPTION:

Learn the fundamental concepts and advanced principles of initiating and trouble-shooting IV therapy. You will examine central venous access devices, peripheral intravenous catheters and ambulatory infusion pumps. The course provides 15 hours of theory and 9 hours of lab practice and simulated experiences. Certification for the skill remains the responsibility of the employing agency.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Provide an overview of infusion therapy
Potential Elements of the Performance:
 - discuss the history of infusion therapy
 - state the nursing roles and responsibilities in infusion therapy
2. Utilize an evidence-based approach to assessment and monitoring of infusion therapy
Potential Elements of the Performance:
 - explore anatomy and physiology as it applies to infusion therapy
 - discuss fluid and electrolyte balance
 - state the principles of parenteral fluid administration
 - identify potential complications and interventions
 - review the role of the Canadian Intravenous Nurses Association (CINA) in developing evidence based, competency based programs
 - review documentation in relation to the standards developed by the College of Nurses, local policy and procedures
3. Make clinical decisions regarding peripheral infusion therapy
Potential Elements of the Performance:
 - describe the equipment and measures required to safely perform and administer peripheral infusion therapy
 - demonstrate in a lab setting peripheral infusion therapy techniques including:
 - preparation
 - vein selection
 - catheter selection
 - insertion technique
4. Comprehend the clinical decision making process regarding Central Venous Access (CVA)
Potential Elements of the Performance:

- describe CVA
 - discuss the selection of CVA devices and their uses
 - explore the care and maintenance of CVA devices
 - discuss peripherally inserted central catheters (PICC)
 - explore the care and maintenance of a PICC
 - describe potential complications of indwelling central venous catheters and devices
 - demonstrate in a lab setting techniques required to:
 - perform an exit site dressing
 - flush an indwelling central venous catheter and/or device
5. Convey patient-specific therapies for infusion therapy
Potential Elements of the Performance:
- discuss parenteral nutrition
 - explore transfusion therapy
 - state the implications, advantages, disadvantages and hazards of administering pharmacological agents via the intravenous route
 - discuss antineoplastic therapy
 - explore pain management
6. Acknowledge special applications for intravenous therapy
Potential Elements of the Performance:
- discuss intravenous therapy as it pertains to:
 - pediatric patients
 - older adult patients
 - ambulatory infusion
 - alternate access e.g. arterial blood gases
 - venipuncture for blood sampling

III. TOPICS:

1. overview of infusion therapy
2. assessment and monitoring
3. clinical decision making
4. patient specific therapies
5. special applications of intravenous therapy

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Suggested website readings prior to start date:

National Competencies in the context of the entry level Registered Nurse practice (June, 2008)

http://www.previewmysite.com/cno.org/docs/reg/41037_EntryToPractic_final.pdf

CNO standards:

<http://www.cno.org/pubs/compendium.html>

REFER TO: Documentation, Revised 2008 (#41001, June 2009)

Infection Prevention and Control (#41001, June 2009)

Medication, Revised 2008 (#41007, June 2009)

RPN's maintaining IV infusion pumps, administering fluids, medications and blood products

http://www.cno.org/prac/yau/2006/06-10_RPN_IVs.htm

RNAO Best Practice Guidelines: Assessment and Device Selection for Vascular Access

http://www.rnao.org/Storage/11/532_BPG_assess_device_select_vascular_summary.pdf

RNAO Best Practice Guidelines: Care and maintenance to reduce vascular access complications.

April 2005 version:

http://www.rnao.org/Storage/39/3380_Care_and_Maintenance_to_Reduce_Vascular_Access_Complications_Supplement_FINAL.pdf

2008 update to 2005 version:

http://www.rnao.org/Storage/39/3380_Care_and_Maintenance_to_Reduce_Vascular_Access_Complications_Supplement_FINAL.pdf

OR:

http://www.guidelines.gov/summary/summary.aspx?doc_id=12686&mode=full&ss=14

Suggested ebook resource:

Cheever, K. (2008). I.V. Therapy Demystified: a self-teaching guide. Available on Sault College MiLibrary site <http://librarymylibrary.com>

Suggested review from recent texts used in your undergrad years--paying attention to anatomy of arteries & veins, circulatory system, homeostasis, osmolarity, infusion therapy, math for rate flows and medications:

Perry, A. G. and Potter, P. A. (2006). *Clinical Nursing Skills and Techniques*, 6th ed. Elsevier Mosby

Smith, S. F., Duell, D. J., & Martin B. C. (2004). *Clinical Nursing Skills: Basic to Advanced Skills*, 6th ed. Pearson: Prentice-Hall

Tortora, G. J. and Derrickson, B. H. *Principles of Anatomy and Physiology*, 12th ed. John Wiley and Sons

Marieb, E. N. *Essentials of Human Anatomy and Physiology*, 8th or 9th ed. Pearson

Morris-Gray, D. G. *Calculate with Confidence*, 4th or 5th ed. Elsevier Mosby

Optional texts:

Phillips, L. D. (2010). *Manual of I.V. Therapeutics*, 5th ed. F. A. Davis Company: Philadelphia. Available at Sault College Bookstore.

Weinstein, S. M. (2007). *Plumer's Principles & Practice of Intravenous Therapy*, 8th ed. Lippincott Williams & Wilkins. Available at Sault College Bookstore.

Schilling-McCann, J. A. (2006). *I.V. Therapy made Incredibly Easy*, 3rd ed. Lippincott Williams & Wilkins

V. EVALUATION PROCESS/GRADING SYSTEM:

Attendance of all classes, lab demonstration and practice is expected for successful completion of this course

Math Test*	35%
Theory Test	50%
Skill Checklist	<u>15%</u>
Total:	100%

*Minimum pass required = 90%. If unsuccessful, one rewrite is allowed in the learning centre within 2 weeks of completion of course

The following semester grades will be assigned to students:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
A+	90 – 100%	
A	80 – 89%	4.00
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

VI. SPECIAL NOTES:Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Prior Learning Assessment:

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question. Please refer to the Student Academic Calendar of Events for the deadline date by which application must be made for advance standing.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.

Substitute course information is available in the Registrar's office.

Disability Services:

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

Communication:

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

Plagiarism:

Students should refer to the definition of "academic dishonesty" in *Student Code of Conduct*. A professor/instructor may assign a sanction as defined below, or make recommendations to the Academic Chair for disposition of the matter. The professor/instructor may (i) issue a verbal reprimand, (ii) make an assignment of a lower grade with explanation, (iii) require additional academic assignments and issue a lower grade upon completion to the maximum grade "C", (iv) make an automatic assignment of a failing grade, (v) recommend to the Chair dismissal from the course with the assignment of a failing grade. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Student Portal:

The Sault College portal allows you to view all your student information in one place. **mysaultcollege** gives you personalized access to online resources seven days a week from your home or school computer. Single log-in access allows you to see your personal and financial information, timetable, grades, records of achievement, unofficial transcript, and outstanding obligations. Announcements, news, the academic calendar of events, class cancellations, your learning management system (LMS), and much more are also accessible through the student portal. Go to <https://my.saultcollege.ca>.

Electronic Devices in the Classroom:

Students who wish to use electronic devices in the classroom will seek permission of the faculty member before proceeding to record instruction. With the exception of issues related to accommodations of disability, the decision to approve or refuse the request is the responsibility of the faculty member. Recorded classroom instruction will be used only for personal use and will not be used for any other purpose. Recorded classroom instruction will be destroyed at the end of the course. To ensure this, the student is required to return all copies of recorded material to the faculty member by the last day of class in the semester. Where the use of an electronic device has been approved, the student agrees that materials recorded are for his/her use only, are not for distribution, and are the sole property of the College.

Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

Tuition Default:

Students who have defaulted on the payment of tuition (tuition has not been paid in full, payments were not deferred or payment plan not honoured) as of the first week of *<choose November, March, or June>* will be removed from placement and clinical activities. This may result in loss of mandatory hours or incomplete course work. Sault College will not be responsible for incomplete hours or outcomes that are not achieved or any other academic requirement not met as of the result of tuition default. Students are encouraged to communicate with Financial Services with regard to the status of their tuition prior to this deadline to ensure that their financial status does not interfere with academic progress.