



Provincial Standardized Chemotherapy and Biotherapy Course Syllabus-
NO IN-PERSON WORKSHOP

COURSE SYLLABUS

2021

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Course Offering: de Souza Institute

Course Format: eLearning

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Registration: Required

A. COURSE DESCRIPTION

This 35-hour course is designed to support nurses building their knowledge and skills in Chemotherapy and Biotherapy administration and care. The program reflects standards identified by a number of national and international bodies, including the Canadian Association of Nurses in Oncology. This course also meets Cancer Care Ontario's Regional Models of Care for Systemic Treatment (2019) recommendations, which specify that Registered Nurses who administer parenteral chemotherapy are required to achieve certification in chemotherapy administration and to engage in annual continuing education. The March 2021 offering does not include an in-person workshop given the COVID restriction. Instead, nurses will complete a workshop replacement assignment.

John Miller's (2008) *Holistic Curriculum* model provides the philosophical framework for the course, interweaving a whole person approach with best evidence and knowledge in safe, standardized chemotherapy and biotherapy administration and care. The course curriculum was developed with feedback and guidance from oncology nursing experts from across Ontario. Participants will receive a certificate upon successful course completion. Following course completion, a chemotherapy preceptorship is required in the participant's local organization, enabling competency development in that system.

The de Souza Standardized Chemotherapy and Biotherapy Course is one component of many in a comprehensive chemotherapy and biotherapy education program. The de Souza chemotherapy and biotherapy program goals are as follows:

- To provide nurses with comprehensive holistic standardized chemotherapy and biotherapy education
- To support patient safety efforts by integrating safety theory within all levels of the curriculum
- To support knowledge translation and application of evidence based practice in systemic therapy
- To integrate Cancer Care Ontario practice recommendations into a comprehensive curriculum

B. COURSE OBJECTIVES

By the end of this course, you will be able to:

1. Demonstrate a holistic, person-centered approach to chemotherapy and biotherapy nursing care.
2. Identify various treatment modalities used in cancer treatment, with emphasis on chemotherapy and biotherapy.
3. Describe the different phases of drug development and clinical trials and the oncology nurses' role in clinical trials.
4. Summarize the factors that influence a person's response to chemotherapy and biotherapy.
5. Identify commonly used chemotherapy and biotherapy agents, their mechanisms of action, administration recommendations, infusion related issues and side effects.
6. Review and analyze chemotherapy orders and calculations.

7. Discuss safe handling issues for chemotherapy and biotherapy, including safe administration practices, management of bodily wastes and spill management. Demonstrate principles of safe handling and spill management in selected cases.
8. Consider and apply safety issues and theoretical principles in common chemotherapy and biotherapy scenarios, which include: human factors theories, pump safety literature, cognitive checking principles and guidelines for independent double checks.
9. Identify nursing procedures and interventions for administration of cytotoxic and biologic agents by the following routes: PO, IM, SC, and IV. Greater time will be focused on oral and intravenous administration, the most common forms of administration.
10. Identify the immediate adverse events and long-term side effects of common chemotherapy and biotherapy agents and their appropriate management.
11. Discuss symptom management and related teaching points for patients and families, as guided by evidence based education principles.
12. Identify internal and external resources to support patients and families in your community.
13. Articulate the ethical and legal considerations frequently encountered in practice and apply a framework to resolve ethical dilemmas.
14. Demonstrate documentation that is consistent with Cancer Care Ontario's recommendations for practice.

C. MODE OF LEARNING

The main mechanisms to facilitate learning in this course are eLearning.

eLearning

eLearning, offered through the de Souza eLearning center, will include the following activities: a review and application of knowledge, self-directed readings, assignments, quiz activities and case studies. The eLearning environment fosters a self-directed approach for participants to progress through the modules at a convenient time, either at home or work. The course timetable, in Section H on pages 7-8 of the course syllabus, outlines weekly expectations for participants.

- Learning and application: Sections and modules are developed by the de Souza education team to reflect the latest knowledge in chemotherapy and biotherapy administration and care. The content is up to date and the learning format is interactive. Learning activities include online modules, quizzes, and case studies.
- Readings are intended to enhance the eLearning content surrounding key topic areas. Required readings further explain important concepts and are marked as required. All other readings are optional and intended to enhance the participants understanding of course content and to expand their learning.
- Assignments have been developed with the intent of engage participants in applying essential competencies related to cancer chemotherapy care and assessment to practice issues. There are one assignment (2 parts: infusion reactions and immunotherapy adverse effects) and one comprehensive case study for course review to complete which will be marked by the facilitator and feedback will be provided.
- Technical support will be provided throughout the course.

D. MODES OF EVALUATION

As part of the evaluation process, you are required to complete the following:

- A baseline evaluation: this survey assesses your knowledge, attitude and confidence, before you begin the eLearning modules for the course.
- Pre-Knowledge Test: Assess your knowledge of chemotherapy and biotherapy prior to taking the course.
- Foundations Modules and Quiz: You will be required to pass a Foundation's Quiz in **Section 3, with a mark of 70% or greater (2 attempts only)**. Individuals that have not completed the de Souza Foundations in Oncology Nursing Course, or who are new to oncology practice, are strongly advised to review the four Foundations Modules that correspond to the quiz.
Access to sections 4 to 17 will not be available until this quiz is passed.
- eLearning sections/modules, required readings, assignments:
 - You are required to complete all eLearning module content in each section and complete all quizzes that correspond with the module content.
 - One final assignment online assignments (**Section 17**: Immunotherapy Adverse Effects case study; and Immediate Completions case studies) must be completed by the due date. You can find the grading rubrics in Section 17.
 - One comprehensive case study must be completed, as a review activity, after completing course module activities. You can choose one from three case studies: solid tumour vs lymphoma vs acute leukemia.
 - You must receive a pass mark of 70% or greater on all course content before the course exam becomes available to you.
- Workshop replacement assignment:
 - Workshop replacement assignment- must be completed by the due date (Week 7). The workshop replacement assignment covers the core content that is presented at the in-person workshop. There are three main components to this assignment: 1) Problem based learning case studies (2 cases), 2) IV Administration Assessment case studies: Passing grade: 75%; 3) Cynthia Leblanc case study- Pass/Fail
- Exam: Participants must write the final exam by the course end date. There are 44 multiple choice questions in the exam. Participants will be given 2 hours to write it. To successfully pass the exam, participants must obtain a **minimum of 36 of out 44 (>81%)**. The exam is open book. No talking is permitted during the exam. The invigilator must be present for the full 120 minutes.
 - We recommend that you attempt the exam at least 1 week before the course ends.

You are allowed a **maximum of two attempts for this exam**. If you are not successful after two attempts, we recommend that you retake this course at a later time.
- Post evaluation: At the end of the course, participants will be required to complete the online post course evaluation through eLearning.

It is your responsibility to ensure that you have completed all course requirements.

When you have met all the above requirements, you will receive a downloadable certificate of completion via *My Account* and will receive a credit towards the de Souza designation. Please

note: your certificate of completion will be available two weeks after the closing of the online course.

E. COMPETENCIES

A number of competencies will be evident within each module and encompass the Canadian Association of Nurses in Oncology Competencies and the College of Nurses of Ontario Standards of Practice.

College of Nurses of Ontario Standards

- Accountability
- Continuing competence
- Knowledge
- Knowledge application
- Leadership
- Relationships
- Professional relationships

Standards & guidelines link:

<http://www.cno.org/en/learn-about-standards-guidelines/standards-and-guidelines/>

Canadian Association of Nurses in Oncology: Competencies associated with cancer chemotherapy nursing practice:

- Comprehensive health assessment
- Supportive and therapeutic relationships
- Management of cancer symptoms and treatment side effects
- Teaching and coaching
- Facilitating continuity of care/ navigating the system
- Decision-making and advocacy
- Professional practice and leadership

CANO Standard Link:

<http://www.cano-acio.ca/conep/>

CANO National Strategy for Chemotherapy Standards Link:

<https://www.cano-acio.ca/page/NSCA>

F. TIME REQUIREMENT AND EXPECTATIONS FOR PARTICIPANTS

To be successful in completing this course, you are encouraged to set aside 4 to 6 hours each week to complete each section as learning is primarily self-directed. Time spent to complete course activities will vary from learner to learner and will depend on preferred learning style, needs and previous oncology experience. Despite variance in learner time to complete the modules and course activities, successful course completion provides **35 learning hours** which can be used for continuing education.

Sections and modules are to be completed sequentially; participants can choose to go ahead and complete learning activities in multiple sections and modules at once but must submit the assignments in the assigned weeks. (Refer to timeline in syllabus).

Your course activity completion will be reflected in your grade book. Evidence of engagement through active participation will result in a positive learning experience. You will be expected to complete all 15 sections (Sections 2-16) through the eLearning system.

Workshop Replacement Assignment: The workshop replacement assignment consists of three main components (1) Cynthia Leblanc case study, (2) Problem Based Learning case studies, (3) IV Administration Assessment case studies. It will you take approximately 8 hours to complete these components. Participants must receive 75% to pass the problem based learning case studies assignment. The Cynthia Leblanc case study will be marked as pass or fail.

Study Guides: Study guides have been developed that correspond with each module in the course. The printable study guides are designed to help you identify, organize and remember key information in the course. The guides will help you recognize related concepts and make meaningful connections between topics, thus helping you to acquire a higher level of understanding. The guides can be a resource to support you in the online open-book exam.

There are study guides for each module in each section of the course. You are not required to complete each study guide, but are encouraged to do so where you feel they will be helpful.

Assignment and case studies: A two part assignment and one case study are required at the end of the course to facilitate your application of essential concepts in the course to practice scenarios that are relevant to your clinical area.

G. FACILITATOR AVAILABILITY

Facilitators of this course are meant to monitor the registration process, to facilitate the eLearning modules, and are available to you for questions throughout the course. You can expect a response to queries within 48-hours.

Technical support is available by contacting support@desouzainstitute.com

H: COURSE TIMELINE

The following sections/modules are to be completed in sequential order according to numerical identifier. Please note that the timeline below is a guide. It is the participant's responsibility to ensure that all course requirements are completed by course end date.

The course starts on March 1, 2021.

Section	Topic	Post Date	Date to Complete
Introduction	eLearning Center Orientation <i>(Optional- but highly recommended)</i>	Within first week of the course	Completion by the end of 1 st week
1	Resources to be Used Throughout the course		Review during the first week of the course and use resources throughout the course
2	Cancer Care System and Person Centred Approach	Within first week of the course	Completion by the end of 1 st week
3	Foundations Introductory Units to Cancer <ul style="list-style-type: none"> Only required to pass quiz with grade of 70% or higher (max. 2 attempts) 	Within first week of the course	Completion by the end of 1 st week
4	Diagnosis, Staging and Treatment	Within first week of the course	Completion by the end of 1 st week
5	Clinical Trials	Within second week of the course	Completion by the end of 2 nd week
6	Patient Education	Within second week of the course	Completion by the end of 2 nd week
7	Safe Handling	Within second week of the course	Completion by the end of 2 nd week
8	Safety Theory	Within second week of the course	Completion by the end of 2 nd week
9	Assessment	Within third week of the course	Completion by the end of 3 rd week
10	Administration	Within third week of the course	Completion by the end of 3 rd week
11	Cancer and Aging	Within third week of the course	Completion by the end of 3 rd week
12	Chemotherapeutic Agents	Within fourth week of the course	Completion by the end of 4 th week

Section	Topic	Post Date	Date to Complete
13	Biotherapy	Within fifth week of the course	Completion by the end of 5th week
14	Oral Systemic Therapies	Within sixth week of the course	Completion by the end of 6th week
15	Adverse Effects	Within sixth week of the course	Completion by the end of 6 th week
16	Immediate Complications	Within sixth week of the course	Completion by the end of 6 th week
17	Final Assignment: Two parts- 1) Immunotherapy Adverse Case Study; 2) Immediate Complications case studies		Due by the end of 7th week.
Workshop replacement assignment	Instructions are posted under the Workshop Replacement Toggle. The additional assignment entails: <ul style="list-style-type: none"> problem based learning cases, IV administration case studies and Cynthia Leblanc case study. 		Cynthia Leblanc case study due Week 8.
Case Study for Review	Complete one case study as review prep for the exam	After completing all course modules	Before writing the exam; by 10 th week of the course
Exam	Covers all topic areas	Complete after the workshop replacement assignment	By the course end date. Workshop replacement group: The earliest you can write the exam is Week 9-10 unless your workshop replacement assignments marks have been posted. Last day to write (including re-write Week 11).
Final evaluation	Online		Prior to writing final exam.

I: FACILITATOR'S BIOGRAPHY

Komal began her nursing career at William Osler Health System in Brampton, Ontario in 2006 on an in-patient oncology unit where she has had the opportunity to provide direct patient care, precept nursing students, mentor nurses, and educate healthcare professionals throughout the organization. Komal values lifelong learning and has demonstrated this in many professional activities nationally and internationally. In 2011, Komal completed an RNAO clinical fellowship that focused on Oncology and Palliative Pain and Symptom Management. Komal holds a BScN from the University of Windsor, Masters in Nursing with a teaching focus from Athabasca University, and Primary Health Care Nurse Practitioner Diploma from Athabasca University. She obtained her Oncology CNA certification in 2010, Hospice Palliative Care CNA certification in 2012 Gerontology CNA certification in 2019. Komal is also one of the first de Souza APNs in Ontario.

Donalda has been an oncology nurse for 45 years, >35 years working in clinical oncology at Mount Sinai Hospital in Toronto, where she worked with both inpatients and outpatients and with both solid tumours and haematological malignancies, and the last 8 as an educator at de Souza. Her lifelong education focus has been on the novice oncology nurse, whether that nurse is a new grad or someone transferring into oncology from another clinical area. Donalda has held certification in oncology from both the Oncology Nursing Society and the CNA since 1998. She has served on the board of directors for the Canadian Association of Nurses in Oncology for seven years, five of which she was treasurer. Donalda has done item writing and reviewer for the CNA oncology certification exam. She continues to be a mentor for those studying for the exam. In 2008, Donalda was nominated by her oncology peers and was one of the 100 nurses from across Canada to receive the CNA Centennial Award honouring her work in education of novice oncology nurses. In 2014, she was again honoured by receiving the Lifetime Achievement Award from CANO.

Additional Information Regarding Learning at de Souza Institute

A. SOCIAL FORUM

The social forum is provided for learners to post news, items of general interest, share information about yourselves and to raise topics of interest beyond the specific questions being discussed in the module-specific forums. All messages of a social nature can be posted in the social forum. This forum is open to all participants, including the facilitator.

B. VIRTUAL LIBRARY

The de Souza Institute has a virtual library that can be accessed to those registered in this course or any other de Souza Institute continuing education program. This resource enables you to access over 1500 e-Journals, 200 e-books and 8 on-line databases such as CINHALL or Ovid-Medline. You can use the virtual library to access the required reading materials for your course. The virtual library can be accessed 24 hours a day at any location that has internet access using a login and password.

C. TECHNICAL SUPPORT

eLearning Centre Orientation

If this is the first time you are taking a course offered by the de Souza Institute, please complete the eLearning Centre Orientation course (free of charge). This course is designed to introduce you to online learning and help you understand how to navigate through the de Souza Institute eLearning centre and courses. It is strongly recommended that you complete this orientation so you will be able to successfully navigate de Souza's eLearning environment.

de Souza Support

If you have questions about the content of a course please email your course facilitator.

If you need assistance accessing or navigating the eLearning Centre, please refer to the eLearning Orientation course. If you have questions or have any general technical difficulties please contact support@desouzainstitute.com.

D. POLICIES AND PROCEDURES

Click the links below to read de Souza Institute's Academic Honesty and Copyright; and cancellation, incomplete and no show policies.

[Academic Honesty and Copyright Policy](#)

[Cancellations, Incomplete and No Show Policy](#)

A 50% refund will be provided to participants who drop the course within its first week (5 business days) of running. Individuals who drop the course after the 1st week will not receive a refund and will receive a failing mark in My Account.

Course content and resources provided in this course are based on best practice guidelines from provincial and national bodies. Please consult your facilitator if you have specific questions related to local protocols and policies as they vary among healthcare organizations.

Appendix A: Final Assignment Part 1 Grading Rubric

Criteria for Part 1 (25%)	Mark
Describe the self-care issues that are relevant prior to Jane starting on treatment with an immunotherapy (pembrolizumab)?	10%
Discuss environmental issues/challenges that is Jane currently dealing with that you should take into account while preparing for this treatment?	10%
Can Jane start immunotherapy while taking prednisone for her asthma flare? Why?	5%
Criteria for Part 2 (75%)	
How do the actions of chemotherapy and immunotherapy differ?	5%
Why must all organ systems be assessed on a regular basis when a patient is receiving immunotherapy?	5%
List the possible screening and assessment tools you could use when providing nursing care for Jane.	5%
Using the NCI CTC AE grading system, grade the following three symptoms that Jane is experiencing? Dry cough, dry mouth, anorexia	3%
Incorporating your knowledge of immunotherapy, describe the management strategies you would recommend to Jane for each of the above symptoms (Dry cough, dry mouth, anorexia	10%
Based on your knowledge of immunotherapy adverse events, what tissue may be affected that is contributing to her fatigue? What test might the oncologist order to investigate this?	5%
What adverse event associated with pembrolizumab is Jane at increased risk of developing because of her asthma? How would this be assessed by the oncologist?	5%
How may Jane's exposure to Joe's second hand smoke affect her response to pembrolizumab?	5%
Two weeks after receiving her third dose of pembrolizumab, Jane is "constantly drinking water". What might this indicate and what would you advise Jane to do?	5%
Is neutropenia a common adverse event in patients receiving immunotherapy? Why/why not?	2%
In addition to stopping treatment, what other major strategy is used to treat grade 3 and grade 4 adverse events due to pembrolizumab? Why is it used?	5%
If treatment with pembrolizumab is stopped, how long should Jane be monitored for the development of additional adverse events? Why?	5%
Describe how you would involve Jane and her family in your treatment plan?	5%
Identify members of the health care team you would involve in Jane's care. Explain how and why.	10%

A grade of 75% or higher is considered satisfactory