PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

The Michener Institute of Education at UHN

RMIP231: Introduction to Research Methods

Please note that Michener may be required to modify content and/or mode of delivery and/or mode of assessment of any course in order to comply with guidelines or emergency orders from government officials in relation to the ongoing situation with the COVID-19 virus. *All changes will be reviewed programmatically to ensure all competencies are covered and program requirements satisfied.*

Instructor and Class Information

Instructor Name	Dr. Brian Hyndman
Email	bhyndman@michener.ca
Phone	n/a
Office Location	Room 844
Office Hours	By appointment only - please email me
Lectures	Weekly lectures (voice over PowerPoint) posted online (via Blackboard)
Course Website:	Blackboard

Course Information

Course Number	RMIP231
Course Title	Introduction to Research Methods

Course Description

This course is designed to introduce you to research methods that can be applied to issues relevant to you and to your discipline. For example, some students may apply research methods to writing and piloting a new protocol/policy; other students may utilize research to create educational material; and others may have a clinical question that can be answered through the application of research methods.

This course will help improve your practice by: making you more adept at reading and critically analyzing the scientific literature; prepare you for your clinical research and evaluation projects; and advance your skills in evidence-based clinical practice (EBCP). For some students, it may also inspire you to make a contribution to the research in your respective areas of interest.

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Total Credits	3
Total Hours	39

Pre/Corequisites

Prequisites

Students in the course must be in their second year of study at Michener.

Exemption Criterion A for MLS and Respiratory Therapy: (1) Successful completion (final grade of C) of undergraduate course in Research Methods, plus (2) successful completion (final grade of C) of undergraduate course in Statistics. These courses must have been completed within the last 5 years.

Exemption Criterion B for MLS and Respiratory Therapy: Successful completion (final grade of C) of undergraduate course in Research Methods AND (2) full summer or academic year employment in a research environment. Acceptable Documentation = University Transcript AND a letter from your immediate supervisor. Volunteer experiences are appropriate to include.

Exemption Criterion C for MLS and Respiratory Therapy: Return to school with a minimum of 2- years in a clinical research setting. Acceptable Documentation = Curriculum Vitae AND a letter from your immediate supervisor. In the event that you have published in a peer-reviewed academic-clinical journal, a copy of this submission and/or link to its location is also considered supporting documentation but should be accompanied by your CV and letter of support. Volunteer experiences are appropriate to include.

Note: You may only use a course and/or experience for one exemption.

Note: Applications for exemptions are strongly discouraged when students have not met the exemption criteria listed above. **Having completed a research paper is not equivalent to completion of a course in research methodology. Similarly, one unit on Research Methods does not constitute breadth of research knowledge and will not be considered equivalent.** Holding a position in a laboratory that does not include working directly in primary research also does not qualify for exemption.

****Applications for exemption must be received by the Registrar's Office no later than 3 weeks prior to the start of the Fall Semester (i.e., no later than Tuesday, August 17, 2021). Late requests will not be considered.**

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Textbooks

Hulley SB. **Designing Clinical Research**. Fourth Edition. Lippincott Williams & Wilkins, 2013. **ISBN**-13: 978-1-60831-804-9. Available at the University of Toronto Bookstore. **Required.** (Kindle version also available on www.amazon.ca)

Learner Supplies

Access to internet and Blackboard registration. **Required.**

Access to Zotero through Michener's Learning Resource Centre (LRC). **Required.**

Access to Michener's Learning Resource Centre (LRC). **Required.**

Core Abilities

1. Communicate clearly and effectively
2. Exhibit professional behaviour
3. Manage the use of time and other resources to complete tasks and attain goals
4. Solve problems using a variety of strategies
5. Take responsibility for one's own actions
6. Work effectively in teams

Program Outcomes

Medical Laboratory Science

1. Conduct professional practice according to established protocols and existing legislation
2. Verify relevant data and ensure that appropriate specimens are procured according to established protocols
3. Analyze specimens using established protocols
4. Perform analytical techniques on specimens that originate from a variety of sources
5. Validate results from specimen analysis
6. Interpret results of specimen analysis
7. Practice quality management
8. Conduct research

9. Demonstrate safe lab practice

Please also refer to the 2015 Canadian Society for Medical Laboratory Science (CSMLS) Competency Profile at https://go.csmls.org/cert/MLTG_CP.pdf

Radiation Therapy

1. Develop radiation therapy competence (skills, knowledge, behaviours) that are portable across national and international health care and professional environments
2. Incorporate exemplary patient assessment and care in a variety of oncological settings
3. Enhance health and social care through inter-professional collaboration and education
4. Enhance competence in evolving and emerging imaging and therapeutic modalities
5. Design an applied research proposal with the potential to report results
6. Model a philosophy of wellness, health education and promotion

Please also refer to the 2014 Canadian Association of Medical Radiation Technologists (CAMRT) Competency Profile at https://www.camrt.ca/wp-content/uploads/2020/02/Modified-Therapy-profile-Final-.pdf

Respiratory Therapy

1. Achieve entry level competencies of the National Competency Framework (NCF)
2. Manage cardio-respiratory needs
3. Exhibit professional behaviour
4. Educate self, patients, families, colleagues and interprofessional teams
5. Collaborate with patients, families, colleagues and interprofessional teams
6. Uphold principles of quality, safety and wellness
7. Demonstrate critical thinking, analysis and problem solving
8. Integrate evidence based research into clinical practice

Please also refer to the 2016 Canadian Society of Respiratory Therapists National Competency Framework at https://www.csrt.com/rt-professional-practice/#framework

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Course Competencies

1. Examine the use of scientific method in health care and apply it to a clinical inquiry

Learning Objectives

1.a. Define the breadth of the scientific method and its role/importance in health care/clinical research

1.b. Identify and understand the research process and key components/milesones within the process

1.c. Describe the importance of formulating the research question(s)

1.d. Identify the key characteristics of good research questions

1.e. Outline the importance of conducting literature reviews as part of the empirical process

1.f. Explore research tools and search engines for conducting a literature review

2. Explain relevant ethical issues that affect health care research

Learning Objectives

2.a. Investigate the Tri-Council guidelines for the ethical treatment of human participants

2.b. Examine the breadth of considerations required in planning and conducting ethical health research

3. Examine qualitative and quantitative research designs

Learning Objectives

3.a. Identify the benefits and limitations of qualitative research designs

3.b. Identify the benefits and limitations of quantitative research designs

3.c. Describe the benefits of combining quantitative and qualitative research designs (i.e., mixed methods) designs

4. Investigate the collection, analysis, and interpretation of data

Learning Objectives

4.a. Explore sources of data beyond survey approaches

4.b. Define levels of measurement

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	COURSE NUMBER: RMIP231	
COURSE TITLE: Introduction to Research Methods	DATE:	Fall 2021
LEAD FACULTY: Dr. Brian Hyndman	REVISED:	July 2021
CHAIR SIGNATURE: Peter Bridge		

4.c. Define descriptive and inferential statistics, including purposeful usage

4.d. Explore the presentation of data (e.g., visuals illustrating measures of central tendency and dispersion)

4.e. Examine key inferential statistical methods used in health research

5. Create a dissemination strategy for a clinical inquiry in health research

Learning Objectives

5.a. Utilize the scientific method to conduct a research inquiry

5.b. Apply critical reading/review skills when engaged in the scientific literature

5.c. Demonstrate breadth of search capabilities when engaged in research activities

5.d. Integrate research resources with the presentation of data and results gleaned from research

5.e. Develop research capacities to engage in evidence-based practice in your future health care role

Course Grading Information

A final overall grade of 60% is required to pass this course.

Grading Scale

% of Total	PAT Title	Assignment Due Date	Week Due
10%	PAT1 ASSIGNMENT: Research Question (Group)	Friday Sept 24 11:59pm	3
20%	PAT2 ASSIGNMENT: Literature Search (Group)	Friday Oct 8 11:59pm	5
10%	PAT3 ASSIGNMENT: Tutorial for the Tri-council Policy Statement (Individual)	Friday Oct 29 11:59pm	8
20%	PAT4 QUIZ: Covering topics from Week 1 until and including Week 11 (Individual).	Friday Nov 19 11:59pm	11
40%	PAT5 ASSIGNMENT: Literature Review Virtual Poster Presentation (Group).	Friday Dec 3 11:59pm	13

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Policies / Guidelines for Success

Academic Policies:

Please refer to Michener's Academic Policies located at http://my.michener.ca/policies/index.php

Policy Statement

Changes to course outlines are governed by The Michener Institute's Course Management Policy

Please note that Michener may be required to modify content and/or mode of delivery and/or mode of assessment of any course in order to comply with guidelines or emergency orders from government officials in relation to the ongoing situation with the COVID-19 virus. *All changes will be reviewed programmatically to ensure all competencies are covered and program requirements satisfied.*

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Class Schedule

Session	Dates	Topic	Readings	Lectures, activities, discussion
1	Sept 9-15	Introduction to course syllabus The overall research process and introduction to Evidence Based Clinical Practice	Hulley text Chapter 1, pgs. 2 to 13.	Form groups – minimum 3, maximum 5 students.
2	Sept 16-22	ASK: defining a research question	Hulley text Chapter 2, pgs. 14 to 22.	
3	Sept 23-29	ACQUIRE: conducting a literature search	McKibbon A, Wyer P, Jaeschke R, Hunt D. Chapter 4 Finding the Evidence. In: Guyatt G, Drummond R, Meade MO, Cook DJ, editors. Users' Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice. Second ed. New York: McGraw Hill Medical; 2008.	ASSIGNMENT: develop a research question with your group.
4	Sept 30-Oct 6	ACQUIRE: conducting a literature search Part 2: Searching library databases)	On-line modules on searching library databases from Michener Learning Resource Centre (TBA)	
5	Oct 7-13	Quantitative research designs I	Hulley text Chapter 7 and 8, pgs. 85 to 116.	ASSIGNMENT: literature search with your group.
6	Oct 14-20	Quantitative research designs II	Hulley text Chapter 10, pgs. 137 to 150.	
7	Oct 21-27	Research ethics	NA	
8	Oct 28-Nov 3	Qualitative research designs I	Robson, C. Real World Research (3rd edition) Sussex UK: Wiley and Sons (2011) Chapter 11, Interviews and Focus	ASSIGNMENT: complete "Course on Research Ethics" (CORE) (individual).

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	COURSE NUMBER: RMIP231	
COURSE TITLE: Introduction to Research Methods	DATE:	Fall 2021
LEAD FACULTY: Dr. Brian Hyndman	REVISED:	July 2021
CHAIR SIGNATURE: Peter Bridge		

Session	Dates	Topic	Readings	Lectures, activities, discussion
			Groups, pgs 278-302.	
9	Nov 4-10	Qualitative research designs II	Cresswell, J.W. Qualitative Inquiry and Research Design: Choosing Among Five Approaches (3rd edition) Los Angeles: Sage (2013) Chapter 8, Data Analysis and Representation, pgs 179-212. Hashem, F., & Merritt, R. (2018). Supporting patients self-managing respiratory health: a qualitative study on the impact of the Breathe Easy voluntary group network. *ERJ open research*, *4*(1), 00076-2017. doi:10.1183/23120541.00076-2017.	
10	Nov 11-17	APPRAISE & APPLY: critical appraisal	Guyatt G, Strauss S, Meade MO, Kunz R, Cook DJ, Devereaux PJ, Ioannidis J. Chapter 7 Therapy (Randomized Trials). In: Guyatt G, Drummond R, Meade MO, Cook DJ, editors. Users' Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice. Second ed. New York: McGraw Hill Medical; 2008. Critical appraisal checklists found at http://www.casp-uk.net/find-appraise-act/appraising-the-evidence/	
11	Nov 18-24	Measurement & data collection	Hulley text Chapter 4, pgs. 32 – 42. Norman GR, Streiner DL. Chapter 1 Names and Numbers: Types of	QUIZ: covering topics from week 1 until and including week 11 (individual).

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Session	Dates	Topic	Readings	Lectures, activities, discussion
			Variables. PDQ Statistics. Second ed. Hamilton: B.C. Decker; 1999. Norman GR, Streiner DL. Chapter 2 Describing Data. PDQ Statistics. Second ed. Hamilton: B.C. Decker; 1999.	
12	Nov 25-Dec 1	Data analysis	Robson,C. Real World Research (3rd edition) Sussex UK: Wiley and Sons (2011),Chapter 16, The Analysis of Quantitative Data, pgs 413-464.	
13	Dec 2-8	Open class		ASSIGNMENT: literature review virtual poster (group).

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Performance Assessment Task

PAT1: Research Question – Due Sept. 24th 2021 (Week 3) 10%

Directions

You and your student group are asked to develop a research question and justify its purpose/content. The question should be on a health or health care related topic that is of interest to you and your group. This research question will form the basis of subsequent assignments – the Literature Search (PAT 2) and the Literature Review Poster Presentation (PAT 5).

Provide a short (one paragraph) description to justify each criterion (see the rating scale table below). The assignment should be 2 to 3 pages double spaced; all margins at 2cm; font Arial 10 or Times New Roman 12. Please add a title page that includes the title of the assignment; due date; and each student member's name and each student number.

This assignment will serve as 10% of your final grade. Submit a copy of your group's completed assignment to the Instructor, by e-mail (to bhyndman@michener.ca). Your group's research question assignment must be received by Friday September 24th 2021 at 11:59pm. Assignments submitted later than this day and time will be penalized with a two mark deduction (i.e. 2/10 total marks) per day, no exceptions. Assignments submitted later than 4:00pm on the Tuesday September 28th 2021 will receive a "zero" (0) grade, no exceptions.

Target Course Competency

1. **Examine the use of scientific method in health care and apply it to a clinical inquiry**

Rating Scale

Value	Description
1	Criteria are missing / incomplete
2	Criteria are present, with some errors
3	Criteria are present with few errors
4	Criteria are present with no errors

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Scoring Guide

	Criteria	Ratings
1.	**Research Question** Question with variables clearly identified: using PICO	1 2 3 4
2.	**Feasible** Questions is manageable in scope	1 2 3 4
3.	**Novel** Question confirm, refute or extend previous findings	1 2 3 4
4.	**Ethical** Question an ethics board would approve	1 2 3 4
5.	**Relevance** Question contributes to scientific knowledge about health/health care	1 2 3 4
	TOTAL	/20
	TORAL FOR COURSE	_20 x 100 x .10 = __

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Performance Assessment Task

PAT2: Literature Search – Oct. 8th 2021 (Week 5) 20%

Directions

You and your student group are asked to do a literature search (**at least two** sources e.g. PubMed, Cochrane, CINHL, etc.) based on the research question developed in Performance Assessment Task 1. The purpose of this assessment is to familiarize you with the literature relevant to your research question.

You and your group are asked to provide a description of the literature search (see the rating scale table below). The assignment should be 3 to 4 pages double spaced; all margins at 2cm; font Arial 10 or Times New Roman 12. Please add a title page that includes the title of the assignment; due date; and each student member's name and each student number.

This assignment will serve as 20% of your final grade. Submit a copy of your group's completed assignment to the Instructor, by e-mail (to bhyndman@michener.ca). Your group's literature search assignment must be received by Friday October 8th 2021 at 11:59pm. Assignments submitted later than this day and time will be penalized with a two mark deduction (i.e. 2/20 total marks) per day, no exceptions. Assignments submitted later than 4:00pm on the Tuesday October 12th 2021 will receive a "zero" (0) grade, no exceptions.

Target Course Competency

1. **Examine the use of scientific method in health care and apply it to a clinical inquiry**

Rating Scale

Value	Description
1	Criteria are missing / incomplete
2	Criteria are present, with some errors
3	Criteria are present with few errors
4	Criteria are present with no errors

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Scoring Guide

	Criteria	Ratings	Total
1.	Clear description of the search process (approximately half a page), Including: a) the names of all the databases searched; b) the search terms used; and c) the number of records initially identified through each of the database searches. *Your search should be executable by others (the course instructor!) and yield the same results*	1 2 3 4	4
2.	Justification for references chosen (approximately 2-2.5 pages). Describe why your group chose the 10 references to include in your literature review poster. This can be done by providing an overall description for all references or smaller descriptions for each of the 10 references (reference each paper in the assignment).	1 2 3 4 x 2	8
3.	Justification for references excluded (approximately half a page). Include reasons why other potential references were excluded.	1 2 3 4 x 2	8
4.	Ten references and their abstracts. Reference using Zotera and append abstracts for each reference chosen.	1 2 3 4	4
	TOTAL		/24
	TOTAL FOR COURSE	_24 x 100 x .20 = __	

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Performance Assessment Task

PAT3: Tutorial for the Tri-Council Policy – Oct. 29th 2021 (Week 8) 10%

Directions

You are asked to complete the Tri-Council Online Tutorial - Course on Research Ethics (CORE) - with Human Participants. This course has eight modules focusing on the guidance in TCPS 2 (Tri-Council Policy Statement) and will take approximately 2 hours to 3 hours to complete.

To access the course, go to: http://tcps2core.ca/welcome

Please register:

- User Type: Other
- Please specify user type: Student
- Affiliation: Other
- Please specify Affiliation: Michener Institute
- Student/Staff Number: please put your student number here
- Language: English
- First Name: please put your first name
- Last Name: please put your last name
- Email: please put your Michener Institute email
- Password: please create a password

This assignment will serve as 10% of your final grade. Submit a copy of your completed certificate to the Instructor, by e-mail (to bhyndman@michener.ca). If your certificate is not received by Friday October 29th 2021 at 11:59pm it will be considered "Not Complete" and receive a zero (0).

Target Course Competency

2. Explain relevant ethical issues that affect health care research

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Rating Scale

Value	Description
Complete	Certificate submitted
Not Complete	Certificate not submitted

Scoring Guide

	Criteria	Ratings	Total
1.	Certificate of completion submitted	10	10
2.	Certification of completion not submitted	0	0
	TOTAL		/10

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Performance Assessment Task

PAT4: Quiz – November 19th 2021 (Week 11) 20%

Directions

This quiz will serve as 20% of your final grade. You are asked to complete a quiz online using Blackboard. You will answer twenty (20) multiple choice questions on lectures from Week 1 until *and including* Week 11. The quiz will be made available on Monday November 15th 2021 at 9am and close on Friday November 19th 2021 at 11:59pm. Quizzes submitted later than this day and time will be penalized with a two mark deduction (i.e. 2/20 total marks) per day, no exceptions. Quizzes submitted later than 4:00pm on the Tuesday November 23rd 2021 will receive a "zero" (0) grade, no exceptions.

Target Course Competencies

1. **Examine the use of scientific method in health care and apply it to a clinical inquiry**
3. **Examine qualitative and/or quantitative research designs**
4. **Investigate the collection, analysis, and interpretation of data**

Rating Scale

This quiz consists of 20 multiple choice questions. Each question will be worth 1% of the assessment. Students are required to receive a mark of 60% (i.e., 2/20) or higher to pass this assessment.

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Performance Assessment Task

PAT5: Literature Review Virtual Poster – December 3rd 2021 (Week 13) 40%

Directions

You and your group are asked to create a Literature Review Virtual Poster based on your Research Question (Performance Assessment Task 1) and Literature Search (Performance Assessment Task 4). This should be a standalone document; your group will not be presenting the material in person. All pertinent information should be included in this virtual poster. The challenge of this assignment is to take a large amount of information and present it in a succinct manner. Specific instructions:

1) Use the PowerPoint template provided on Blackboard to create the poster (delete the "tips boxes"). You may change the colour scheme and design of the poster. Do not change the font size of the titles, headings and body of the poster. It is strongly recommended you and your group add charts, diagrams and/or photos (ensure you have appropriate permissions).

2) Sections include:
   a. Research Question: This section provides a brief overview of the problem. Include a description of population, exposure (or intervention), comparison (if applicable) and outcome.
   b. Introduction and Background: This section provides background on the health issue (e.g. epidemiology and the pathophysiology (if relevant)). Define important terms here.
   c. Methods: include in this section: i) the names of all the databases searched; ii) the search terms used; and iii) the number of records initially identified through each of the database searches (this is information taken from Performance Assessment Task 2, Literature Search).
   d. Summary of Literature: This section should describe the most current knowledge about your research question. Please provide a summary of the ten articles (chosen for Performance Assessment Task 2, Literature Search).
   e. Critical Appraisal: Choose three (3) of the ten articles (chosen for Performance Assessment Task 4, Literature Search) and provide a critical appraisal of them using the three main questions: i) are the results valid?; ii) what are the results?; iii) will the results help locally?

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	COURSE NUMBER: RMIP231	
COURSE TITLE: Introduction to Research Methods	DATE:	Fall 2021
LEAD FACULTY: Dr. Brian Hyndman	REVISED:	July 2021
CHAIR SIGNATURE: Peter Bridge		

f. Summary and Discussion: i) provide a concise summary of the literature review; ii) state how gap(s) and/or controversies in the literature leads logically to the need for the future research; iii) provide suggestions for future research.

g. References: Include references of the ten main articles. Include other references cited in the "Introduction and Background" and "Summary and Discussion". To minimize space use this format: first author, year, abbreviation of journal e.g. Smith, J 2012 AJRCCM.

Target Course Competencies

1. **Examine the use of scientific method in health care and apply it to a clinical inquiry**
2. **Explain relevant ethical issues that affect health care research**
3. **Examine qualitative and/or quantitative research design**
4. **Investigate the collection, analysis, and interpretation of data**
5. **Create a dissemination strategy for a clinical inquiry in health research**

This assignment will serve as 40% of your final grade. Submit a copy of you and your group's completed assignment to the instructor, by e-mail (to bhyndman@michener.ca). Your group's Literature Review Virtual Poster must be received by Friday December 3rd 2021 at 11:59pm. Assignments submitted later than this day and time will be penalized with a three mark deduction (i.e. 3/40 total marks) per day, no exceptions. Assignments submitted later than 4:00pm on the Tuesday December 7th 2021 will receive a "zero" (0) grade, no exceptions.

Rating Scale

Value	Description
1	Criteria are missing / incomplete
2	Criteria are present, with some errors
3	Criteria are present with few errors
4	Criteria are present with no errors

PROGRAM: Medical Laboratory Science, Radiation Therapy and Respiratory Therapy	**COURSE NUMBER: RMIP231**	
COURSE TITLE: Introduction to Research Methods	**DATE:**	**Fall 2021**
LEAD FACULTY: Dr. Brian Hyndman	**REVISED:**	**July 2021**
CHAIR SIGNATURE: Peter Bridge		

Scoring Guide

	Criteria	Ratings	Total
1.	**Research question:** This section provides a brief overview of the problem. Include a description of population, exposure (or intervention), comparison (if applicable) and outcome	1 2 3 4	4
2.	**Introduction and Background:** This section provides background on the health issue (e.g. epidemiology and the pathophysiology (if relevant)). Define important terms here	1 2 3 4	4
3.	**Methods:** Include in this section: i) the names of all the databases searched; ii) the search terms used; and iii) the number of records initially identified through each of the database searches (this is information taken from Performance Assessment Task 2, Literature Search).	1 2 3 4 X 2	8
4.	**Summary of Literature:** This section should describe the most current knowledge about your research question. Please provide a summary of the ten articles (chosen for Performance Assessment Task 2, Literature Search).	1 2 3 4 X 2	8
5.	**Critical Appraisal:** Choose three (3) of the ten articles (chosen for Performance Assessment Task 4, Literature Search) and provide a critical appraisal of them using the three main questions: i) are the results valid?; ii) what are the results?; iii) will the results help locally?	1 2 3 4 X 4	16
6.	**Summary and Discussion:** i) provide a concise summary of the literature review; ii) state how gap(s) and/or controversies in the literature leads logically to the need for the future research; iii) provide suggestions for future research.	1 2 3 4 X2	8
7.	**References:** Include references of the ten main articles. Include other references cited in the "Introduction and Background" and "Summary and Discussion". To minimize space use this format: first author, year, abbreviation of journal e.g. Smith, J 2012 AJRCCM.	1 2 3 4	4
8.	**Visual Assessment:** Lay-out in logistical manner, no spelling or grammatical errors, visual appeal, use of varied formats for presentation of information (text, graphs, diagrams etc.), no layout errors (inconsistent spacing, bullets etc.)	1 2 3 4	4
	TOTAL		/56
	TOTAL FOR COURSE	_56 x 100 x .40 + _	