GS/NURS 5300N 3.0 Quantitative Research Methods in Nursing Science
Course Outline – Winter 2018

Course Director: Iris Epstein, RN, PhD

A. Calendar Course Description
This online course focuses on acquisition and application of fundamental concepts, methods, and procedures of quantitative nursing research required to develop a research proposal; including but not limited to: developing researchable questions, designing research selecting appropriate methods and analysis strategies. Co-requisite or prerequisite NURS 5100 6.0 or with permission of the Course Director.

B. Expanded Course Description
This course will enhance the student’s knowledge in quantitative research methodology, one of the multiple ways of knowing in nursing. The student will develop the skills required to write a research proposal using quantitative research methods.

By the end of this course, the student will be able to:
- formulate researchable questions and hypotheses;
- understand the relationship between paradigm, theory and research;
- synthesize current literature review pertaining to the research questions;
- articulate the linkages between the research question and study design;
- compare and contrast various quantitative research designs;
- understand threats to the internal validity of quantitative research designs and methods to reduce such threats;
- identify appropriate data collection methods, including validity and reliability of data collections instruments; and
- demonstrate knowledge in a selected number of intermediate data analyses methods, such as multiple regression, ANOVA, and RM-ANOVA.

This is an online course and students are required to regularly access Moodle and their yorku.ca email account. Note that email communication about the course should be via your yorku.ca email. Access to Moodle requires a Passport York login and password. If you have managed to obtain a copy of this outline, but do not yet have a Passport York account, click on http://www.yorku.ca/computing/students/accounts/passportyork.html to set one up. To access Moodle, click on http://moodle.yorku.ca and remember to join the course so you can obtain materials and start posting.
C. Progress Through the Course

Contact Information:
- Room: 349 HNES Building, Keele Campus, York University
  Tel: (416) 736-2100, ext. 22812; Email: iepstein@yorku.ca
- Office hours: Upon request via adobe connect
- I am usually quick to respond to student e-mails questions, within 24 hours. However, if your question relates to the course material please post it on Moodle discussion threads. Although you can access the course anytime I will check our course discussion threads once/twice a week (just like in a face to face course). **Please note the course modules will be open for weekly discussion postings Thursday to Wednesday (midnight)** (because Thursday is the first day of class in the semester).

An online course is not the same as a distance course. In a distance course, students generally complete work on their own timetable and without interaction with others, apart from submitting assignments. An online course, on the other hand, is more interactive and requires attention to the course schedule and to dialogue among the students and the Course Director. This course is divided into **FIVE Modules**, 2-3 weeks are spent on each module. In each module, I post a word document summary of the readings (you still must do the readings) followed by a series of articles and summarized by a snowball discussion question/s of the week. Because we all learner differently I also embedded selected short (5-10 min) videos links on some topics. These are open sources videos and some are my videos. For each Module I am including the power point slides (topics headings) that comes with the textbook editor series. This is a very manageable course, if you stay on top of the readings and complete the weekly discussions. You will need about 7 hours a week for this course.

This course is 3.0 credits which means that if you were on campus then you would have 12 weeks of 3 hour classes, or 36 hours total in seminar/classroom settings. In addition, the rule of thumb is that over a semester you need another 3-4 hours **per classroom hour** to complete readings, assignments, and other details related to a course. Graduate courses are more demanding than undergraduate courses, so 3.0 credits in a graduate program is more intensive than 3.0 credits in an undergraduate program. Typically, 9.0 credits in a term is considered full-time for graduate students, whereas a full-time undergraduate student would be expected to take 15.0 credits in a single term.

Literature on e-learning highlights the important of maintaining “social presence” to support students’ success (Johns, 2016, p.77). Thus, we will have **FOUR Mandatory** Adobe connect synchronized meeting. To accommodate your learning and your schedule we will have 7-8 participants in each session (small group live meeting). Each session will run for 60 min twice a week so arriving on time is paramount. To participate, you need internet connection, camera (most computers have built in camera and sound). It is your responsibility to check ahead your connectivity and software requirements (Ithelp@yorku.ca for technical support).

**Agenda Adobe Connect:**
- **Jan 10th** – Wk 1 – 6-8pm Intro course outline SPSS Tips bring your laptop with internet connection
- **Feb 5th**- Wk 5 Session 1: 9:00-10:00 (Gr 1-2); Session 2: 12:00-13:00 (Gr. 3-4) Quantitative research design and rigour
- **March 12th**- Wk 10-Session 1: 9:00-10:00 (Gr 3-4); Session 2: 12:00-13:00 (Gr 1-2)— Results/ analysis / SPSS
- **March 26th** Wk 12- 9:00-10:00 everyone together closure and summary

To help us stay connected (increase social presence) we will have both synchronized (e.g., adobe connect) and a synchronized (e.g., snowball) discussions. You are expected to participate regularly in online discussions to not only help you understand the material but also apply it to your everyday
nursing practice. We will begin these discussions on Jan 8th. I have found, and student themselves tell me, that checking in most days (so reading postings from other students regularly) and also responding to the group keep the workload manageable and helps students get the most out of the course. It is important that you plan your time and are prepared to spend the needed hours to complete the work to the best of your ability. It is not a good idea to be the last one to submit on the discussion items, as you will earn a low mark.

The course has been organized in a way that helps you build on knowledge and skills as you move through the modules. You are expected to have successfully completed an undergraduate research course and to have familiarity with statistics (e.g., an undergraduate statistics course, or an applied course such as NURS 2300 at York), but I recognize that it may have been some time ago. Therefore, the text readings and additional material posted on the course Moodle website include information about basic quantitative research as well as the graduate level work. I would encourage you to reflect on your knowledge level and then to review the basic material carefully so you will be successful in the course. There’s a lot of material to be covered, but it is doable and has been completed very successfully by students before you so take a deep breath and don’t panic when you start to read the course outline. If you stay with the schedule, then you will be on track and won’t get overwhelmed.

D. Resources

Required text.

Please purchase from Amazon

Recommended text.

Please purchase from Amazon

Obtaining articles. (N.B. all articles are available online through York’s library).
You can obtain a copy of the articles by:
- Go to http://www.library.yorku.ca/ccc/jsp/homepage.jsp
- Under Title Quick Search, type in the name of the journal (e.g., Journal of Nursing Scholarship), click on eResources, and then Go.
- Click on one of the resources that include the year you are looking for, e.g., v.31, 1999 - [Blackwell Journals].
- You will then need to sign in when accessing from home (Passport York or library number).
- Click on the year you want, e.g., 2008, and then the required volume and issue, e.g., Volume 40, Issue 2.
- Scroll down to find authors’ names (Rew, Grady, Whittaker, & Bowman) and click on PDF version; you can then print the article (you also can save the article to your own computer or USB key which I recommend you do).

Required Articles for Online Discussion


Internet as a resource for health information: Results from a California population-based study. *International Journal of Medical Informatics* 103: 49-54.


**Additional Material**


E. Evaluation

There are three aspects to evaluation in this course: online snowball discussions (a synchronized), individual assignments and one group data analysis assignment. You will read assigned articles and chapters in your required text to inform online discussion within 5 modules.

I DO NOT GIVE EXTENSIONS, SO PLAN YOUR TIME.

<table>
<thead>
<tr>
<th>Evaluation Strategy</th>
<th>Due Date</th>
<th>Percentage of Grade</th>
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<tbody>
<tr>
<td><strong>1. Online Snowball Discussion</strong></td>
<td></td>
<td>20% (total)</td>
</tr>
<tr>
<td><em>(A group mark)</em></td>
<td></td>
<td></td>
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<tr>
<td><strong>2. Individual Written Work</strong></td>
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<tr>
<td><em>(A) Research Proposal</em></td>
<td></td>
<td></td>
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<tr>
<td>• First Research Proposal</td>
<td>Feb 7th, 2018 (end of week 5)</td>
<td>25%</td>
</tr>
<tr>
<td>• Final Research Proposal</td>
<td>April 6th, 2018 (week 13)</td>
<td>25%</td>
</tr>
<tr>
<td><em>(B) Research Question Presentation</em></td>
<td>Jan 31st, 2018 (end of week 4)</td>
<td>10%</td>
</tr>
<tr>
<td><em>(C) Own Data File and Analysis</em></td>
<td>March 16th, 2018 (end of week 7)</td>
<td>10%</td>
</tr>
<tr>
<td><em>(D) GROUP Study Data File and Analysis</em></td>
<td>April 2th, 2016 (end of week 12)</td>
<td>10%</td>
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</table>

1. **Online Snowball Discussion (20% total)**

Discussion about topics will take place online within discussion threads to answer the questions posted for each week by the Course Director. I have placed you into groups of 5-7 students because it will be easier for you to interact in smaller groups rather than as a whole class. Your group will work together for a weekly online snowball discussion. I will respond to each group separately during the week, and may post an overall comment to all groups at the end of the week. You are welcome to read postings in any group, but you can only make a post within your own group. Although there is a discussion question for week 1, grading for online discussion starts in week 2, so it is imperative that groups are finalized by the end of week 1. Students may not change groups after week 1.

**Snowball Discussion:**

Online participation is critical to your learning because knowledge comes through the debate that occurs in a safe scholarly environment. Snowball discussion have been used for several years in education and business training classes, but were first introduced by Lyman (1981). A snowball discussion emerges from the teaching techniques of Think–Pair–and Share (Bounds, 2013). McCall, Holly, and Rambaldi (2006) argued that the Think-Pair-Share an equity pedagogical best practice because it provides graduate students with (a) think time, a period to reflect and compose their answer, (b) behavioral rehearsal time, a period to practice stating their unique thoughts and responds to a classmate, and (c) safe space to agree or disagree with a learning partner. The research on Think-Pair-Share is compelling in that it encourages increased student participation, and higher levels of thinking and questioning of ideas (McCall, Holly, & Rambaldi 2006).

The Course Director will post a question(s) in each week’s forum for each separate group. From week 1-11 there will be a question and I strongly encourage you all to answer these questions within your group every week. You will find all of the questions in each module on the course Moodle site title: “Snowball Discussion questions”, so you can read ahead of time and plan your work if you wish. Please answer the questions in such a way as to engage in discussion and present alternate views. Here is key strategy to use snowball discussion (see table 1 for more details).
Students are required to review and respond to discussion every week by posting a substantive contribution which is supported with reference to assigned readings or other relevant course resources. Students are also responsible for posting questions to their group, critiquing points made by other students, and fielding questions posed to them. Please see the “Snowball Discussion” file posted on the course Moodle site for further information and examples.

Add image that represents you (e.g. Hobby…). Remember to be kind and respectful.

Collaborate with your group and rotate sequences and consider giving sufficient time. For example, a student that agreed to post first must post early in the week.

Students responses are nested under each other. (1st student post, 2nd student reply to 1st, 3rd student reply 2nd ..)

Be prepared – Most of the questions I asked are not only opinion but requires you to read and synthesize course material.

Each student post adds a new idea to the discussion. The kind of questions I am asking has several answers. When you paraphrase previous post ideas that’s consider repeating not adding new idea.

Each student FOCUS on the questions asked. There are more than one questions.

There is no word count limit but please write concisely (range of 250-300 a post)

Course director feedback will be given through the term so as to help you improve your posts

Table 1: Online Snowball Discussion Grading

<table>
<thead>
<tr>
<th>Below 69%</th>
<th>Good 70-79%</th>
<th>Excellent 80-89%</th>
<th>Exceptional 90-100%</th>
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</thead>
<tbody>
<tr>
<td>Replied to peer by adding new ideas/information</td>
<td>Repeated ideas in the same words; OR First posting sets the stage in the wrong direction for next post (e.g. wrong module)</td>
<td>Repeated ideas but used different words; OR First posting sets stage somewhat but does not provide explanation</td>
<td>Added new idea but did not explain; OR First posting partially sets the stage in somewhat appropriate direction for next posts (explanation provided)</td>
</tr>
<tr>
<td>Answered the question(s)</td>
<td>Did not answer question – with minimal to</td>
<td>Answered part of the question(s) correctly – with good grasp of the required</td>
<td>Answered the majority of the question(s) correctly – with comprehensive grasp of the required</td>
</tr>
<tr>
<td>No Grasp of Module/Required Reading/Objective(s)</td>
<td>Reading/Module/Objective(s)</td>
<td>Module/ Required Reading/Objective(s)</td>
<td>Required Reading/Objective(s)</td>
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<tr>
<td>------------------------------------------------</td>
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</tr>
<tr>
<td>Supplied Relevant Nursing References – At Least 2 As Per Guidelines</td>
<td>Did Not Include Relevant References</td>
<td>Used Mainly Non-Academic/Not Peer-Reviewed Journal References, That Were Used in Class</td>
<td>Used the Mix of References Used in Class (One Required) (Scholarly and Non Scholarly With at Least One Current)</td>
</tr>
<tr>
<td>The New Idea Added is Connected to Module/Required Readings and Additional Literature</td>
<td>Did Not Connect to Module/Required Readings and Additional Literature</td>
<td>Made Partial/Good Critical Thinking Connection to Required Module/Readings and Additional Literature - Minimal Linking Example from Scenario (Or Statement) to Module/Required Readings/Literature.</td>
<td>Made Excellent Higher Critical Thinking Connections to Required Module/Readings and Additional Literature – Discussion Mainly Links Example from Scenario (Or Statement) to Module/Required Readings/Literature</td>
</tr>
<tr>
<td>Concise Posting (Within 250-500 Word Count - This is a Guideline)</td>
<td>Did Not Adhere to Word Count (E.g. Over by More Than 50 Words)</td>
<td>Exceeded Word Count by 26-50 Words</td>
<td>Exceeded Word Count by 10-25 Words</td>
</tr>
<tr>
<td>Used APA Format, Wrote Clearly and Expressed Ideas Concisely with Clear Relevance to Topic</td>
<td>Many (&gt;5) Grammatical Errors and Use of Slang? Informal Language? Many (&gt;5) APA Formatting Errors</td>
<td>Some (3-5) Grammatical Errors and Some APA (3-5) Formatting Errors</td>
<td>Minimal Grammatical (&lt;3) and APA Errors (&lt;3)</td>
</tr>
<tr>
<td>Adhered to Word Count Within 5-10 Words (Over)</td>
<td>No Grammatical and APA Errors</td>
<td></td>
<td></td>
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</table>
2A. First part research proposal (25%) and Final Research Proposal (25%) = (50% total)
Writing a research Proposal is the major assignment for this course and covers what you have learned about quantitative research methods. The goals of this assignment are for you to (a) learn about the research process and (b) write a research proposal. There are two parts to this assignment, each in APA format:
(i) First part research proposal (a 3-page draft); (ii) Final Research Proposal (FRP) which will be double-spaced, 8-10 pages maximum (excluding title and reference pages), and will describe your proposed plan for conducting a quantitative research study that involves more than just a simple descriptive design, this means, not only a simple descriptive study, but adding some intervention via a quasi-experimental or other design. Please see Table 2 for the grading criteria for the FRP.

Start early, that means Week 2, not Week 4, by choosing a phenomenon of interest and work on your proposal throughout the course. You are encouraged to pick a topic that you have a genuine interest in and to continue working with this phenomenon of interest in your GS/NURS 5200 Qualitative Research Methods in Nursing Research course. Keeping the same phenomenon will allow you to explore how the different paradigms answer questions about a similar phenomenon and will help you to stay focused on one area of interest, but it is not mandatory.

Remember this is not an actual study you will be undertaking: it is an assignment for a course in your MScN program. You are asked to design a reasonable study that flows coherently from area of interest through all the aspects of a study. A reader should be able to tell from your purpose just what you will be doing in the study; the hypotheses should clearly flow from the literature review and theoretical framework; your design should allow you to answer the questions; the data analysis should ensure all hypotheses are answered; and so on.

Even if you are thinking about conducting the study at some point in the future, you cannot use limitations from a potential site etc. to constrain this assignment. For example, you must ensure that the sample size you propose for your study is adequate, so at least 30 subjects per group. If you know in reality that the potential site might only give you a total of 40 subjects then that is irrelevant to this assignment - you need to make sure that for the purposes of this assignment you have sufficient people in each group; similar comment for all aspects of the study. You may find it easiest to make up a scenario and study that would allow you to show you understand how such a proposal should look. That way you could think hypothetically and figure out all the pieces of a proposal for your specific design, without being constrained by real life situations.

While this assignment may have some basis in your reality, it must meet all the requirements of the assignment, including being a correlational/interrelation, quasi-experimental, or true experimental study. The study you design for this assignment may not be feasible in your potential site and you may need to just pretend it is if you insist on keeping your site in mind, e.g., to allow for sufficient numbers of subjects. You do not want to lose marks on the FRP because you were so caught up in thinking about doing the study for real that you failed to meet all the requirements of the assignment. Students tend to lose marks in this assignment when they forget that it is course work and not something they will be expected to complete in their employment setting. While it is commendable to think about how you might conduct a research study in your practice setting, the type of design required for this course project may not be suitable in your setting.

Do not try to ‘walk before you can run’ in this assignment, i.e., do not attempt to tackle very complex issues when you are just learning. The really complex issues in nursing need very complex designs and you are too new to designing research studies to be able to think through all the possibilities with really complex designs. When you try to do too much then there are many problems, e.g., with validity, and you risk having your proposal marked down, e.g., for not being feasible as an experimental study. It is
better for you to concentrate on less complicated studies while you learn so you can complete quality work that matches your expected knowledge at this graduate MScN level.

The first part research proposal provides you with opportunities to lay out your preliminary thinking about the final proposal and to obtain detailed feedback from the Course Director to ensure you are on the right track. Therefore, you must submit substantive work, a real proposal and not just your preliminary plans around what you might do. You should use APA format for both drafts, including a cover page and page numbering. Please include appropriate references in the body of each draft and also include a properly formatted reference list. Please follow the order and components laid out for the FRP. You should use the headings in the grading rubric for your final proposal as a way of organizing your drafts. It will help ensure you cover the required areas and will provide you with a good start for your FRP. In the first paper, you will describe an overview of your plan with a focus on specific areas (see below) and the Course Director will evaluate the drafts for feasibility and fit to the identified problem.

There is no grading rubric for the first part research proposal, but the rubric for the FRP is a good guide to the areas that should be covered. However, marking will reflect the early stage of development for this first research proposal, rather than the detail required in the full proposal. Grades will be based on congruency of the plan, as well as feasibility of the proposed plan. You need to show what you are going to do, why it needs done, and how you plan to do it. The detailed response you receive will provide you with direction for the final proposal.

**First part research proposal (25/50)**
In this first part research proposal paper, you will draft your plan for only the following areas: title; introduction; literature review; statement of purpose; theoretical framework; research question; and study hypothesis. You will have covered all of these topics in Module One of the course. You will need to start working on this assignment early in the course so you can find literature about your topic of interest and also identify a suitable theoretical framework. However, you will continue to deepen your understanding as you prepare for your FRP and more detail will be expected in the FRP, e.g., you will likely include more references in your FRP than you had in this draft. The first part of the research proposal paper must be submitted to the Course Director by 11.55pm EST on Feb 7, 2018 by e-mail.

**NOTE:** Even though you submit assignments through Moodle, it is helpful in an online course if you name your file in a consistent format. For this draft, please name your file ‘First name Surname initial Part One’, e.g., ‘IrisE Part One’ rather than everyone calling their file ‘draft’ or some variation. Finally, choose a relevant and interesting title for your project: do not simply call it ‘Research Proposal Assignment’ - I should be able to tell what your study is about just from reading your title. Remember to save as a ‘doc’ file and not ‘docx.’

**Final research proposal. (25%; 25/50)**
Please review the appropriate module notes and course readings as you work on each area to ensure you understand the relevant issues. See table 3 (end of document for evaluation grid). In essence in this part you build on your previous research proposal paper and add the areas: research design; data collection tools and procedures; sampling strategy; ethics; statistical analyses; and evidence-based contribution and conclusion. Do not include a copy of the data collection tools with this draft, except for the demographic form which you may include if you want feedback on it. Do not include the consent form with this draft. You will have covered all of these topics except data analysis in Modules 2 through 4. You will need to consider material from Module 5 as you plan your proposed analysis, but as noted before you are expected to have previously completed undergraduate courses that covered basic analysis, so the material should not be totally new.

All parts of the proposal must come together here so I can identify how the research design etc. fit with the intent of your proposed study. If you need to modify your research question and hypotheses based on
feedback for Part One, then please use the new, modified version. Please name your file ‘First name Surname initial FRP’, e.g., ‘IrisE FRP.’ Note that your final proposal is to include:

• **Title**: Short, descriptive, gives the reader a clear idea of your topic.
• **Introduction**: Include a statement of the problem and describe how the problem is relevant to nursing practice, education, or administration.
• **Literature Review**: Not as comprehensive as would be for a real proposal, but need to educate the reader about the problem by identifying the gaps and inconsistencies in the scholarly literature about your phenomenon/topic of interest. Describe other studies conducted on the topic and compare/contrast them to highlight and explain contradictory results. Literature should be no more than 10 years old and preferably from 2000 on. Focus on using primary sources, so do not ‘cite.’ References should relate directly to the problem under study and provide a rationale for the research question and hypothesis. Discuss the implications for the problem under study - see text for synthesis of critique of each source of information/more details on most relevant sources and refer to tables noted for Module 1.

**NOTE:** Do not read too many articles as you prepare for the paper or include too many references in this project. **Approximately 15-20 references in total** should be sufficient and 25 is the maximum. You should have one or two about the theory you choose; one for each instrument you use to show reliability and validity; and the rest should be concerned with the literature review about the topic, previous use of instruments, and so on. Remember that your literature review will not be as comprehensive as it would be for a real proposal.

• **Statement of Purpose**: Include variables, sample, setting.
• **Theoretical Framework**: Clearly, but briefly, articulate the theory that guides your research and show how this theoretical perspective guides your plan, e.g., in selecting the variables and how they will be measured, or in developing content and format for an intervention. Can be a grand theory (e.g., Orem), middle-range (e.g., Mishel’s Uncertainty in Illness), or micro theory (e.g., Women’s Anger).

**NOTE:** Recall that paradigms direct a researcher and the positivist paradigm is more closely aligned with quantitative research. You may notice that the theory you currently use in your practice is not a good fit for a quantitative study - be careful that you do not try to force a fit between a theory and this study. Your chosen theory for this proposal must be appropriate for the research problem and must be able to allow a quantitative design. **Be sure to use the Boxes in chap. 6** of the text to help you ensure your chosen theory is appropriate for the research problem and clearly links to all aspects of the proposed study.

• **Research Question**: Propose one research question derived from the literature review that identifies the key study variables, the relationships among them, and the population under study. Must be 3 study variables, not including demographic variables, e.g., 1 independent variable (IV) and 2 dependent variables (DVs) in an intervention study (remember that an IV could be 2 groups that are compared across DVs).

• **Study Hypothesis**: Need at least one hypothesis derived from the literature review, but must use all 3 study variables. A complex hypothesis may be possible, i.e., all 3 variables are used in a single hypothesis. Or you may decide on multiple hypotheses, e.g., one hypothesis about how the IV is expected to affect the first DV, and another hypothesis in regards to the second DV. Must explain the anticipated outcome of the study.

• **Research Design**: Propose one appropriate quantitative research design that addresses all hypotheses. **Must be experimental (quasi- or ‘true’ experiment) or correlation/ interrelational; a descriptive/exploratory study would not be adequate.** Explain how the specific design will be useful in answering all hypotheses. Consider and discuss threats to internal and external validity.

**NOTE:** Remember that the design must be chosen with the sample and measurement in mind. You also need to consider the issue of threats to validity of the study design. Think about the kinds of control you can build into the design that will minimize threats. **Table 8.2 in the course text will be useful as you consider the most appropriate design for your proposed study.** In addition, Table 8.5 offers suggestions...
about experimental designs. Boxes 10.1 and 11.1 of the course text might be useful as a critiquing tool of your own work.

**Data Collection Tools and Procedures:** Describe study procedures, including how data will be collected, who will collect data, and what training will be given to data collectors. Describe content, purpose, reliability, and validity for each measure (tool), as well as why each is proposed. Use established measures only (ones that been used in published research and have reliability and validity evidence), except for the demographic sheet. Develop a demographic sheet that includes age and gender, as well as other appropriate variables. Consider what you really need to know about the subjects and be focused in the questions you ask. You should put a copy of the data collection tools you will use, including a demographic sheet, in appendices, so as part of your final paper for submission. If you are unable to obtain a copy of an actual tool (e.g., you would have to pay for it), then put as much as you know about it in the appendix - you might find example questions in an article you read - and explain why you have not included it. Reliability and validity information belongs in the body of your paper however.

**NOTE:** You need to identify the type of measures that would be appropriate for measuring the variables you have selected. Make sure you are clear on the level of measurement for each variable and that you understand which is the independent and which are the dependent variables. Use all of the available resources to find appropriate instruments - readings from this course, the library, your colleagues, the internet, etc. Sharing your findings with other students is recommended: it may save someone else extra searching and, in turn, another student may just tell you about a tool that would work perfectly in your FRP. Remember, you may be unable to obtain an instrument from its developers, so be sure to review any publication(s) that describe how the instrument was developed and/or its validity and reliability.

**Sampling Strategy:** Include the target population and possible subjects. Explain sampling and recruitment procedures. Describe sample size needed (with rationale relevant to the focus and design of the study; ensure feasibility), type of sample, and sample inclusion and exclusion criteria.

**NOTE:** Consider the sample you are thinking about for your FRP when you select approaches to collecting data - who is in the study (i.e., subjects’ characteristics) is key to what kind of data the sample can provide. There must be a match between what you can obtain from the sample and the data you seek. For example, you cannot expect to collect data about stress levels in the elderly if your sample ranges in age from 18 to 45 years. You will need to carefully consider where you might access subjects, as well as any limitations to your sampling plan.

**Ethics:** What review board approval is needed for human subjects’ research? How you might recruit subjects and obtain their consent. Develop an informed consent form and include a copy of it with your FRP in an appendix. See the Faculty of Graduate Studies website for information about ethics and for a sample informed consent form: [http://www.yorku.ca/grads/policies/ethics.htm](http://www.yorku.ca/grads/policies/ethics.htm)

**Statistical Analyses:** Outline proposed statistical analysis for your chosen methodology (remember, you will not actually be conducting this study or running the tests, so all your language will be about what you 'will do'). Include statistics you would use to describe the study sample and results from the data collection tools, e.g., means and standard deviations for continuous data; independent *t*-tests to compare two groups. Provide as much detail as possible about what data will be used to address all study hypotheses and what statistical tests will be used to test the resulting statistical hypotheses. So will need to discuss inferential tests for data collection tools to show how they will link back to answering hypothesis. Consider how sample characteristics might influence testing hypotheses.

**NOTE:** A well written research proposal will flow from one section to another - the analysis plan must be clearly linked to research question. The tests must help you answer your research question and match the hypothesis. For every hypothesis you propose, you need to provide details about the specific statistical test that will be used to test the hypothesis. In addition, you need to propose appropriate descriptive statistics for your study, e.g., to describe the sample characteristics, and to report measures of central tendency and dispersion for the dependent variables.
• **Evidence-Based Contribution and Conclusion:** Explain how your research plan will contribute to nursing/healthcare. Should be persuasive to the reader. Must also provide a formal conclusion to the proposal, so emphasize why this study needs to be done.

• **Appendices:** Note that appendices follow references. They should be labelled in order of when they appear in the text and must be titled. Page numbers for appendices should be consecutive and follow the order of the whole proposal, e.g., if references finish on p. 18 then Appendix One would start on p. 19. Start the appendix material on the page labelled Appendix, i.e., do not label one page ‘Appendix One: Demographic Form’ and then put the actual Demographic Form on the next page.

**NOTE:** The assessment rubric and the weighting (marks) assigned to each section may help you determine approximately how many pages of this 8-10 page paper you should devote to a section.

Remember that the FRP assignment should be written as a formal paper using APA. Headings are required; they will help you organize your paper and remind you of what areas you need to work on. Headings also make it easier for the reader to follow (and are usually helpful for a professor to grade). The grading rubric contains sections that would make good headings for your FRP.

**NOTE:** This FRP is different from your online discussions where you had to support your comments with reference to the course text and other materials. You were all learning, as well as teaching one another. It was important to provide those references so the Course Director knew you were understanding the material and so other students were directed to appropriate sources. But in this FRP, your voice is no longer that of a student. Rather, you need to think of yourself as a researcher who is applying for funding and has to convince a reviewer that your study should be funded. You should expect, however, that a reviewer understands the rationale behind the various aspects of your proposal, e.g., that a strong literature review uses current, primary sources. The reviewer would be assessing your proposal to ensure you have the appropriate aspects clearly outlined and that they all fit together in a coherent whole that deserves to be funded. You do not, therefore, explain every part of your FRP and reference why you are doing something, e.g., do not outline your design and then reference the course text about what it means. When you are asked to provide rationale, such as related to sample size, then a reference might be helpful. Mostly, your references should be about the literature review, the theoretical framework, and the tools to be used along with evidence of their reliability and validity. Remember, the goal of this FRP is for you to share your ideas and demonstrate your ability to design a strong research proposal. It is about showing what you have learned throughout the course, but it is at a higher level of synthesis than your previous online work.

**2B. Research Question Presentation (10%), Due Jan 31 2018, 1155pm by e-mail**

The purpose of this assignment is to share with the class your research ideas and get feedback. Research is done in team and sometimes receiving feedback can help you better identify issues and challenges. You will create a powerpoint (PP) presentation for the class based on what you have written for your first part research proposal paper. You can audio record your presentation (preferred) or you can have speaker’s notes or subtitles in the powerpoint slides. This will help you to clearly think about the research process and logic of your thinking. The marking will be in two parts:

Each student will review an anonymous one presentation assigned by me, and give a score 0-5.

Then I will review the presentation and give a score 0-5.

I will add these scores for a mark out of 10. 0-1 mark for each of Statement of the Problem, Literature Review, Purpose, Theoretical Framework, and Research Question/Hypotheses, see rubric Table 2.
Table 2: Research Question Presentation

<table>
<thead>
<tr>
<th>Statement of the Problem /Introduction</th>
<th>Score</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>An arguable thesis for problem to be addressed by the proposed study is clearly stated. Captures the reader’s attention immediately. (Score=1)</td>
<td>Does not clearly identify an argument. (Score=0)</td>
<td></td>
</tr>
<tr>
<td>Literature Review (LR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Every point is clearly supported by current, strong evidence using mostly primary sources. (Score=1)</td>
<td>No attempt to explain how the LR relates to the topic of interest. (Score=0)</td>
<td></td>
</tr>
<tr>
<td>Purpose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose statement includes variables, sample, setting. (Score=1)</td>
<td>Does not clearly identify a purpose. (Score=0)</td>
<td></td>
</tr>
<tr>
<td>Theoretical Framework</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theoretical framework to guide the proposed study is clearly outlined. Reader can easily follow how the concepts link to the variables under study and/or how the theory guides the study. (Score=1)</td>
<td>No link between theoretical framework and concepts /variables under study. No explicit fit of theory to proposed study. (Score=0)</td>
<td></td>
</tr>
<tr>
<td>Research Question/ Hypothesis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well-articulated research question all variables included in a complex hypothesis or separate, multiple hypotheses. All proposed hypothesis/es are testable, feasible. (Score=1)</td>
<td>Research question not clearly expressed. No hypotheses are testable, feasible. (Score=0)</td>
<td></td>
</tr>
</tbody>
</table>

2C. Own Data File and Analysis (10%), Due March 26, 1155pm by e-mail

See pp. 9-13 of Module 5 before beginning this assignment. The overall purpose of this assignment is to provide you with opportunities to apply data and practice using SPSS to analyse and interpret. You will need to apply the knowledge from your statistics course as well module 5 provides practice and basic directions. You will have the opportunity to work through much of the assignment during the group activity for week 11, though the activity and this assignment are not completely identical. Each student will use the same variables, but everyone must enter their own data and data cannot be identical to those of any other student.

- Create an SPSS data file with the following variables: ID; Sex (1 = male; 2 = female); Hair colour (1 = brown; 2 = red; 3 = blonde; 4 = grey; 5 = black); Age (in years); and Grades (A, B, C, D, E, F).
- Make up data for 30 subjects for each of the variables you created and enter data into SPSS.
- Save the completed data file in SPSS as ‘First name Surname initial Own Data.sav’, e.g., IrisE Own Data.sav’.  
- Write one hypothesis that you could test given the data you have; propose an appropriate statistical test to test the hypothesis; and conduct the test.
- Copy and paste the output (test result) into your Word document.
- Highlight the p-value and the test statistic in the output table.
- Below the output, interpret a characteristic as appropriate for the variables used, e.g., most men (e.g. 65%) in the sample had grey hair (only need 1 interpretation).
- Then interpret the result (in both words and statistical language), i.e., if the null hypothesis was supported or refuted.

There is no specified page limit for the Word document; no references or reference list; APA format needed for font, cover page, running head, and page numbering only - may need to use landscape orientation and adjust page margins to less than 1” to ensure output table fits. The submitted assignment will consist of 2 files: (a) Word document with a cover page, output table with highlighted p-value and test statistic, and written interpretations of results as noted above; and (b) your own data file as an SPSS file attachment. Both files must be submitted to the Course Director by 11.55pm EST on Feb 26th, 2018, by e-mail. Unlike your other assignments, you will be able to submit 2 separate files for this assignment. NOTE: For this assignment, please name your Word file ‘First name Surname initial Own Data’, e.g., ‘IrisE Own Data.’ Remember to save as a ‘doc’ file and not ‘docx.’
2D. Study Data File and Analysis (10%)

See pp. 9-15 of Module 5 before beginning this assignment. You will have the opportunity to work through similar questions to those in this assignment during the group activity for week 12, but the questions for the activity and this assignment are different. Using the ‘practice data.sav’ file, answer the following questions. Note that first you will need to decide which statistics to select - use the examples from Module 5 as well as your course text to help you determine the appropriate test.

- Copy and paste each question into your Word document; start each question on a new page.
- Copy and paste each SPSS output into your Word document under the appropriate question.
- For question 1, highlight on the output the results you discuss in your answers.
- For question 1, write your answers in the space below the output in your Word document.
- For questions 2-5, highlight the p-value and the test statistic in the appropriate output table.
- For questions 2-5, write your answers below the output.
- For questions 2-5, interpret the results (in both words and statistical language), i.e., if the null hypothesis was supported or refuted.
- For questions 2-3, interpret a characteristic as appropriate for the variables chosen, e.g., most people in the sample were married (only need 1 interpretation).

1. Choose a scale (at least interval) data variable other than ‘age’:
   a) What is the most appropriate measure of central tendency? (Also, interpret output).
   b) How much does the sample vary? (Also, interpret output).
2. Is there a statistically significant difference in recoded educational status between male and female partners? Interpret one characteristic of this sub-sample.
3. At time 4, is there a statistically significant difference in MUIS scores depending on patients’ marital status? Interpret one characteristic of this sub-sample.
4. What is the relationship between anxiety and uncertainty of illness for partners at baseline and is the result statistically significant?
5. Do patients have higher total QOL scores than their partners at the end of the study and is the result statistically significant?

There is no specified page limit for the Word document; no references or reference list; APA format needed for font, cover page, running head, and page numbering only - may need to use landscape orientation and adjust page margins to less than 1” to ensure output table fits. The submitted assignment will consist of your Word document with a cover page, output tables with highlighted p-value and test statistic, and written interpretations of results as noted above. Do not submit the study data file as I already have it. Submitted to the Course Director by 11.55pm EST on April 2nd, 2018 by e-mail.

NOTE: For this assignment, please name your Word file ‘First name Surname initial Study Data,’ e.g., ‘IrisE Study Data.’ Remember to save as a ‘doc’ file and not ‘docx.’

Grading for Graduate Courses

Grades, other than online discussion, will be reported in accordance with the Faculty of Graduate Studies’ system:

- A+ (Exceptional)
- A (Excellent)
- A- (High)
- B+ (Highly Satisfactory)
- B (Satisfactory)
- C (Conditional)
- F (Failure)
- I (Incomplete)
For further information please see: http://www.yorku.ca/grads/calendar/facultyregulations.pdf

NOTE: The following information provides more detail about what is expected for various levels of grades. You can see how important critical analysis, logical flow, structure, and content are to the grade you will earn. Also, writing style is important so please review the APA-related files I’ve posted in Moodle before submitting any assignments. The format of the example cover page is strongly recommended, but not mandatory in the MScN program. However, if you get into the habit of using the format then you will always remember to provide the required information no matter which course you are taking. I much prefer that you do use it.

**A+ Exceptional:** Thorough knowledge of concepts and/or techniques and exceptional skill or great originality in the use of those concepts/techniques in satisfying the requirements of an assignment.

Outstanding; work of exceptional quality. Content is complete, accurate, and at a high level; consistently strong in structure, expression, mechanics (grammar, punctuation, and spelling), and presentation. Well organized, linkages evident, and logical conclusions/proposals. Excellent comprehension of the subject; sound critical and analytical thinking; innovative ideas on the subject. Contains original and credible argument or presentation of the assigned topic with attention to many details and perspectives; excellent use of the literature, and draws on a wide range of current and/or relevant sources that serve as the foundation of arguments/proposals. Evidence of much effort and personal involvement with the topic. Writing style is clear and succinct with correct use of grammar, punctuation, spelling, and referencing format. Errors of expression are infrequent and do not detract from the assignment’s effectiveness.

**A- to A High to Excellent:** Thorough knowledge of concepts and/or techniques together with a high degree of skill and/or some elements of originality in satisfying the requirements of an assignment. Other attributes are similar to “A+” assignment. The principle difference between an “A+” and an “A” assignment is that the grader can find very few or no areas for improvement in an “A+” assignment.

**B to B+ Satisfactory to Highly Satisfactory:** Good to thorough knowledge of concepts and/or techniques together with a fairly high degree of skill in the use of those concepts/techniques in satisfying the requirements of an assignment. Good to very good quality work with no major weaknesses. Well focused on the topic; clear; explicit; discussion shows more than adequate comprehension of the subject. Some degree of critical and analytical thinking; some use of the literature; most details and perspectives are discussed, but considerations of additional ones would have improved the assignment. Some evidence of personal involvement with the topic. In most cases, writing style is clear and succinct with correct structure, grammar, punctuation, spelling, and correct use of referencing format. Errors of expression are occasional rather than chronic and do not obscure meaning.

The principle difference between an “A-” assignment and a “B+” assignment is in the quality of the discussion. A “B” grade is a competent assignment of good quality with no major weaknesses; similar to a “B+” assignment, but with evidence of a lesser degree of critical and analytical thinking.

**C Conditional:** Less than satisfactory level of knowledge of concepts and/or techniques together with some skill in using them to satisfy the requirements of an assignment. A less than adequate assignment. Fair comprehension of the subject, but some weaknesses in content and/or structure. Discussion is vague even though on topic; important details or perspectives are left out. Minimal use of the literature; minimal evidence of critical and analytical thinking; transitions may be inconsistent; evidence may be occasionally unconvincing or incomplete. At times lacks clarity and succinctness. Minimal evidence of personal involvement with the topic. Occasional/many errors in structure, grammar, punctuation, spelling, and referencing format, but not so serious or chronic that they make the assignment difficult or impossible to understand.
The principle difference between an “B” assignment and a “C” assignment is in the quality of the discussion with the “C” assignment being more vague than the “B” assignment. A “C” assignment may have more errors in structure etc. than are acceptable in a “B” assignment.

F. Course Topics at a Glance

Students are expected to complete course reading prior to engaging in course activities. Some learning activities are completed independently, while others involve posting for group discussion.

The following table lists topics by week and module. The appropriate chapters in your text also are identified. Chapters are for the 8th edition of Polit and Beck which is the course text.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1</td>
<td><strong>1st synchronized Adobe Connect: Intro to course review SPSS Jan 10, 6-8pm</strong> We will use your laptop with internet connection to find SPSS and upload file</td>
<td>• Chap. 1 9th edition Polit &amp; Beck (2012)</td>
</tr>
<tr>
<td></td>
<td>• Overview of the research process in quantitative studies</td>
<td>• Chap. 3</td>
</tr>
<tr>
<td></td>
<td>• Developing a theoretical or conceptual context</td>
<td></td>
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<tr>
<td></td>
<td>• Conceptualizing research problems, research questions, and hypotheses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Finding and critiquing evidence: Research literature reviews</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ongoing Reading- not specifically for Module 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Writing proposals to generate evidence</td>
<td>• Chap. 5</td>
</tr>
<tr>
<td></td>
<td>• Translating Research Evidence into Practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Communicating/disseminating quantitative research</td>
<td>• Chap. 29</td>
</tr>
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<td></td>
<td></td>
<td>• Chap. 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chap. 28</td>
</tr>
<tr>
<td>Week</td>
<td>Topic</td>
<td>Text</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>------</td>
</tr>
</tbody>
</table>
| Module 2 | Planning a nursing study  
Designing quantitative studies  
Enhancing rigor in quantitative research  
Undertaking research for specific purposes  
Thoughts on triangulation  
Assignment 2B-Research Question Presentation – Jan 31st (end wk 4) (10%)  
2nd Adobe Connect meeting  
Feb 5 x 2 sessions-  
Quantitative research design and rigour  
Assignment 2A – First Part research proposal paper due Feb 7th (end wk 5)(10%) | Chaps. 8  
Chap. 11 & Chap. 25  
Chap. 10 |
| Module 3 | Designing and implementing a data collection plan  
Collecting structured data  
Assessing measurement quality in quantitative studies  
Developing self-report scales  
N.B. Reading week Feb19-23rd, so no postings online | Chap. 13  
Chap. 14  
Chap. 15 |
| Module 4 | Quantitative sampling techniques  
Generating research evidence ethically | Chap. 12  
Chap. 7 |
| Module 5 | Describing data through statistics  
Using inferential statistics to test hypotheses  
Using multivariate statistics to analyze complex relationships (multiple regression, ANCOVA, factor analysis, path analysis)  
Designing a quantitative analysis strategy: From data collection to interpretation | Chap. 21  
Chap. 22  
Chap. 23  
Chap. 24 |

**Adobe Connect Meetings- March 12 and closure  
March 26 x 2 sessions each**  
- Assignment 2C - Own Data File and Analysis due March 16th, 2018 (10%)  
- Assignment 2D – GROUP Study Data File and Analysis due April 2nd, 2018 (10%)  
- Assignment 2A - Final Research Proposal due April 6th, 2018 (25%)
# Table 3: Final Research Proposal

<table>
<thead>
<tr>
<th>Assessment Rubric for Final Research Proposal</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Statement of the Problem</strong>&lt;br&gt;An arguable thesis for problem to be addressed by the proposed study is clearly stated. Captures the reader’s attention immediately. (Score=3)</td>
<td><strong>Does not clearly identify a thesis.</strong> (Score=0)</td>
</tr>
<tr>
<td><strong>Literature Review (LR)</strong>&lt;br&gt;Writing is clear, logical, and very organized around a developed thesis. Every point is clearly supported by current, strong evidence using mostly primary sources. Consistent and critical analysis of the identified literature about the topic of interest. (Score=4-5)</td>
<td>Writing is ambiguous with poor organization. Lack of logical flow. Few points are supported and evidence is minimal and/or mostly not current; uses mostly secondary sources. Scant critical analysis of the identified literature about the topic of interest, (Score=2-3)</td>
</tr>
<tr>
<td><strong>Purpose</strong>&lt;br&gt;Purpose statement includes variables, sample, setting. (Score=2)</td>
<td>Purpose is vague. (Score=0.5)</td>
</tr>
<tr>
<td><strong>Theoretical Framework</strong>&lt;br&gt;Theoretical framework to guide the proposed study is clearly outlined. Reader can easily follow how the concepts link to the variables under study and/or how the theory guides the study. (Score=4-5)</td>
<td>Theoretical framework to guide the proposed study is unclear. Reader cannot easily follow how the concepts link to the variables under study and/or how the theory guides the study. (Score=2-3)</td>
</tr>
<tr>
<td><strong>Research Question/Hypothesis</strong>&lt;br&gt;Well-articulated research question that includes the three variables. All three variables included in a complex hypothesis or separate.</td>
<td>Research question and hypothesis/es not clearly expressed and/or all three variables are not included. At Research question not clearly expressed. No hypotheses are testable, feasible.</td>
</tr>
<tr>
<td>Assessment Rubric for Final Research Proposal</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Research Design</strong></td>
<td>Chosen design is able to address all hypotheses. Design is systematically outlined with explicit rationales. Multiple, potential threats to internal and external validity described and ways to limit threats considered appropriately. (Score = 4-5)</td>
</tr>
<tr>
<td><strong>Data Collection</strong></td>
<td>Study procedures well described and appropriate for the study. All instruments are clearly described, including evidence of validity and reliability (V&amp;R). Rationales explicit. Copies of all instruments appended as available or explains why not possible; demographic form included. (Score = 4-5)</td>
</tr>
<tr>
<td><strong>Sampling Strategy and Ethics</strong></td>
<td>Sampling strategy is clearly outlined. Sample size and type are appropriate for study. Approach to both recruitment and obtaining consent is appropriate. Consent form included. Rationales explicit. (Score = 4-5)</td>
</tr>
<tr>
<td><strong>Statistical Analyses</strong></td>
<td>Appropriate descriptive statistics for sample and study variables.</td>
</tr>
<tr>
<td>Evidence-Based Contribution and Conclusion</td>
<td>Statistical analyses appropriate to test hypotheses for all variables. Appropriate consideration of sample characteristics in analysis. (Score=4-5)</td>
</tr>
<tr>
<td>APA Style and Format / References</td>
<td>Clearly articulated contribution of potential findings to nursing/healthcare. Very persuasive to reader. Conclusion is clear and strong. (Score=3)</td>
</tr>
<tr>
<td></td>
<td>Few errors in APA style and format and do not detract from content. All sources are fully referenced in text and reference list and properly formatted. (Score=3.5-4)</td>
</tr>
</tbody>
</table>

TOTAL