

A POLYTECHNIC INSTITUTION

3

School of Health Sciences

Program: Bachelor of Technology in Nursing

Option:

NURS 8000 Systematic Inquiry

Start Date:

January 2006

End Date:

May 2006

Total Hours:

Total Weeks: 48 16 Term/Level: 6

Course Credits:

3

Hours/Week:

Lecture:

Shop:

Lab:

Seminar:

3 Other:

Prerequisites

Course Name

Course No.

NURS 8000 is a Prerequisite for: **Course Name**

Course No. LIBS 7001

Critical Reading and Writing

NURS 8330

Nursing Practicum 8 – Leadership

NURS 8132 Practicum 7

Co-requisite

Course No.

Course Name

NURS 7134

Community Home Health

Course Description

NURS 8000 is a nursing theory course that focuses on developing the process of systematic inquiry. Knowledge from rehabilitation, illness and injury prevention, acute specialty nursing, client self-care and research is analyzed and integrated into decision making for chosen clinical case studies. Development of a decision-making model assists the learner to apply, integrate and evaluate knowledge while using the systematic inquiry process.

Detailed Course Description

The purpose of this course is to assist the learner to engage in a process of systematic inquiry to enhance the learner's ability to create and use knowledge from a variety of sources. Case studies and related decision-making exercises give learners opportunities to apply their critical thinking skills in the systematic evaluation of various sources of knowledge for nursing practice including acute care nursing, rehabilitation, illness and injury prevention, client self-care and formal research. A project provides the opportunity for the learner to reflect on their thinking skills in the systematic inquiry process. The purpose of the project is to develop a decision-making model that may be used in practice. This course uses the case study teaching-learning strategy in a seminar format. (This course is modified from NSSC 8000 developed by Specialty Nursing Faculty at BCIT.)

Evaluation

| Seminar Participation | 25% | Comments: All assignments must be completed to achieve a |
|-------------------------|------|--|
| Research Critiques | 35% | satisfactory standing in the course. |
| Decision Making Project | 40% | |
| TOTAL | 100% | |

Course Learning Outcomes/Competencies

At the end of this course the student will be able to:

1. develop skill in systematic inquiry by:

- critically analyzing various types and sources of knowledge related to rehabilitation, illness and injury prevention, acute care nursing, client self-care and research.
- critically evaluating knowledge from a variety of sources related to rehabilitation, illness and injury prevention, acute care nursing, client self-care and research.
- synthesizing knowledge from rehabilitation, illness and injury prevention, client self-care and research into a decision-making process.
- considering and analyzing multiple perspectives as part of a decision-making process.
- using systematic inquiry to explore alternative ways of thinking about practice.
- 2. evaluate knowledge generated from the use of various research methods.
- 3. critically read research articles.
- 4. analyze and evaluate qualitative and quantitative research studies through the use of group discussion and a formal written critique and presentation.
- 5. make reasoned decisions regarding the way in which research could influence nursing practice.
- 6. make reasoned decisions regarding application of specific research studies to case studies.
- 7. critically listen to and evaluate formal and/or informal presentations of knowledge and nursing research.
- 8. develop reflective skepticism.
- 9. challenge assumptions arising from self, peers, research and the literature as sources of knowledge.
- 10. collaborate with peers, instructors and practice professionals to develop own systematic approach to inquiry.

Process Threads Relevant to this Course

- Professionalism Students build on their existing nursing knowledge base and begin to acquire specialized
 acute care nursing knowledge. This includes identifying related rehabilitation issues, actual or potential health
 problems and risk factors, developing risk prevention strategies, and incorporating research findings about
 health risks, risk reduction and rehabilitation into a plan of care based on selected case studies. Students are
 accountable and responsible for the work they have agreed to do.
- Communication Students interact effectively as a group member. They independently establish working relationships with group members, give and receive constructive feedback, monitor group function, and share their ideas, thinking and learning materials. They promote self-esteem, comfort, growth and partnership with clients and families.
- Systematic Inquiry Students are increasingly independent with critical thinking. They critically analyze and evaluate various types and sources of knowledge related to rehabilitation, illness and injury prevention, acute care nursing, client self-care and research. They use research findings as a source of discussions with colleagues. They analyze multiple perspectives as part of a decision-making process. They use systematic inquiry to synthesize alternative ways of thinking about practice. They are reflectively skeptical.
- Professional Growth Students take responsibility for their learning by acquiring knowledge that facilitates critical thinking and problem solving related to selected case studies. They facilitate learning of group members by effectively sharing their knowledge and articulating their thinking processes. Students demonstrate increasing independence in thinking about and reflecting on their thinking. They are committed to professional growth. They invest time and effort in their learning. They accept responsibility for their learning needs by independently talking with colleagues and instructors about their practice, articulating their perspective and accepting and using feedback to develop expertise.

Date

• Creative Leadership — Students establish collaborative partnerships with group members and work to foster collaborative decision-making. They use team building, negotiation and conflict resolution skills to collaborate with group members. They interact assertively and demonstrate initiative within the group.

■ Verification

| I verify that the content of this course outline is current. | |
|--|---------------|
| Marcy Norrel | Vee. 14, 2005 |
| Authoring Instructor | Date |
| I verify that this course outline has been reviewed. | |
| ADWhitoside | Dec. 14, 2005 |
| Program Head/Chief Instructor | Date |
| I verify that this course outline complies with BCIT policy. | |
| Treema | Dec. 15/05 |

Note: Should changes be required to the content of this course outline, students will be given reasonable notice.

Dean/Associate Dean

Instructor(s)

| Selma Whiteside Instructor | Office Location: Office Hrs: | SE12 418 | Office Phone: E-mail Address: | 604-451-6953 swhiteside@my.bcit.ca |
|-------------------------------|------------------------------|----------|----------------------------------|---------------------------------------|
| Anne Houseman Instructor | Office Location: Office Hrs: | SE12 418 | Office Phone: E-mail Address: | 604-432-8686 ahouseman@my.bcit.ca |

■ Learning Resources

Required:

- Stamler, L.L., Yiu, L. (2005). *Community Health Nursing: a Canadian Perspective*. Toronto: Pearson Prentic Hall.
- Burns, N., Grove, S.K. (2003). *Understanding Nursing Research (3rd ed.)*. Philadelphia: W.B. Saunders.
- Canadian Nurses Association. (1997). Code of ethics for registered nurses. Ottawa: Author.
- Health Canada. (1997) Supporting self-care: The contribution of nurses and physicians. Ottawa: Author. Available free at www.hc-sc.gc.ca/hppb/healthcare/pubs/selfcare
- College of Registered Nurses of British Columbia. (2005). *Professional Standards*. Vancouver: Author.
- Prochaska, J.O., Norcross, J.C., & DiClemente, C.C. (1994). Changing for Good. New York: Avon Books.
- A medical-surgical nursing text
- A pediatric nursing text

On Reserve in the library:

- ♦ Hoeman, S.P. (1996). Rehabilitation nursing: Process and application (2nd ed.). St. Louis: Mosby.
- ◆ Pender, N.J. (1996). Empowerment for self-care. In Pender (Ed.), Health Promotion in Nursing Practice (3rd ed.). Stamford, CT: Appleton & Lange.

See course schedule for additional required readings that are available for purchase from the bookstore or may be accessed in the library, on reserve.

Course Format and Content

Students will work in learning partnerships to explore the following case studies:

- Traumatic Brain Injury (Adolescent)
- Cystic Fibrosis (School age child)
- Congestive Heart Failure/Venous Stasis Ulcer (Older elder)

All of the case studies take place in the context of the community. When exploring the above situations, students will consider the following concepts:

- Health Promotion
- Illness and Injury Prevention
- Epidemiology
- Self-Care
- Rehabilitation
- Research
- Decision Making

■ Course Format and Content

Students will meet in a seminar setting for three hours a week with an instructor to explore case studies for the purpose of learning content, developing thinking and decision-making skills, and identifying learning needs. A portion of class time will be devoted to addressing content specifically related to research and decision making. During the remainder of class time students will apply knowledge and a variety of decision-making models to the case study. Application of knowledge includes but is not limited to the course concepts, independent research brought to the group by students and material presented in class by the instructor. It is an expectation that students have previously acquired skills that will promote effective group functioning therefore emphasis will be on developing skill in the systematic inquiry process for the purpose of decision making.

Information for Students

- 1. Students are expected to identify individual learning needs that may be met in this course. Please talk with the Instructor to see how this might be accomplished.
- 2. Assignments are due by the beginning of class on the dates specified. If an assignment is late, the mark for the assignment will drop 10% for each school day it is late.
- 3. Students may be required to submit a medical certificate if a student's ability to complete the course is affected for medical reasons. Please see the BCIT Nursing Program Medical Certificate Definition attached to this course outline.

Attendance

We believe that dialogue contributes to both thinking and learning. Therefore:

1. Attendance is required in this course. The different perspectives, thinking and experiences shared during the sessions will expand the thinking of all participants. Also, students will be doing independent work to share with the group. This work is required for the group to accomplish its task and move on to other tasks. Therefore, if students are absent for more than 10% of the planned activities without a medical reason, they may be prohibited from completing the course (see BCIT Policy re: attendance).

Course Evaluation

Students have the right and the responsibility to evaluate the course. Ongoing feedback will be obtained from students who are currently in the course so students' needs and course outcomes can be facilitated. At the end of the term, a review will be written that is aimed at modifying the course for subsequent students.

Student Evaluation

The reflective journals, research critiques and the decision making project must be completed to achieve a satisfactory standing in the course.

I. Participation – Group skills and group work summaries – 25% of final mark.

1. Group Skills - 10%

It is an expectation that students will actively participate in the group so the group functions effectively and the group's learning goals are met. Student's will demonstrate effective group skills and bring independent work to class for critique and discussion as assigned and determined by the group. Independent work brought to the group will include the information and thoughtful critique of at least 2 research articles for each case study. Satisfactory ability to contribute to group functioning will result in the full 10% of marks for this component. Unsatisfactory ability to contribute to group functioning will result in no marks being awarded and will be determined by the instructor.

The instructor will consider feedback from the group and student self-evaluation in determining an unsatisfactory mark. At the completion of the first and third cases each student will evaluate each group member and themselves using the Group Participation Evaluation Form and submit these to the instructor. In the event that a student is not facilitating group process and working toward the group's goals, then the student in consultation with the instructor will develop a learning plan to address the student's learning needs. Both the student and instructor will then document progress toward the student's learning goals. It is an expectation that all students will seek out and give constructive feedback to group members related to independent research and group skill performance.

2. Group Work Summaries - 15%

Each small group is expected to present a summary of the case study work at the completion of the first and second case studies. At the completion of the third case study a written group work summary will be completed. The 'Student Guide' to each case study provides instructions for the group work summary. The group work summary will be graded out of 10 marks by the instructor. Each group has 15 minutes to present including time for questions. This is an informal presentation.

Students must achieve a satisfactory mark (50%) in participation (group skills and group work summaries) to achieve credit for the course.

II. Research Critiques – 35% of final mark

Three separate research critiques will be completed; one for each case study in the course. The first critique is worth 3%, the second 15% and the third 17%.

The first critique will be done as a small and large group activity in class. The format for the second and third critiques will be an individual in-class written critique.

The purpose of the research critiques is to provide the opportunity to learn about, read and critically analyze research reports for the purpose of determining the usefulness of the research for practice. Your critique of the research may result in a decision about the applicability of the research to the relevant case study. This decision will be made in the small group and shared with the large group.

Research Critique #1 (3% of final mark). Due Friday of Week 4.

Critique #1 is done orally during class. Three marks will be awarded to each student for meeting the oral critique criteria. If the criteria are not met, no marks will be awarded.

The following article will be critiqued for the Olga Padrowski case study (critique #1). It may be found in the NURS 8000 Course Readings module and on reserve in the library (electronic & print copy).

Naylor, M.D., Brooten, D., Campbell, R., Jacobsen, B.S., Mezey, M.D., Pauly, M.V. & Schwartz, J.S. (1999). Comprehensive discharge planning and home follow-up of hospitalized elders: a randomized trial. *The Journal of the American Medical Association*, 281(7), 613 – 620.

Prior to class:

- a. Read chapter 12 of your research text Burns & Grove (2003).
- b. Using the Comprehension Research Critique Guidelines found on p. 402 of Burns & Grove (2003) make point form notes on the research article listed above. The purpose of these notes is to provide a basis for your participation in an in-class oral critique. Be sure to follow the instructions given in your text for the critique.
- c. Read any relevant chapters in the text that may assist you in understanding the research article and therefore in contributing effectively to an oral critique. For example, you may want to review Chapter 5, *Understanding Theory and Research Frameworks*, prior to critiquing the framework used in the research.
- d. Make a decision regarding the usefulness of the research for practice and for guiding decision making related to the Olga Padrowski case study.

Assignment Criteria

Comprehension

During class each student in their small group will:

- a) contribute four relevant, useful points related to the Comprehension Research Critique Guidelines on page 402 of Burns & Grove.
- b) provide a clear, logical rationale or example or content from the research study to support each point made.

Evaluation

a) articulate a decision regarding the usefulness of the research for practice and for guiding decision making related to the Olga Padrowski case study.

Each small group will make a short 5 minute presentation addressing the three criteria above. Students will complete a short evaluation of each of their small group members' work.

Research Critique #2 (15% of final mark). Due Friday, Week 8.

The purpose of the critique is for students to demonstrate comprehension of *qualitative* research concepts by critiquing one research study. The following article will be critiqued for the John Cahill case study. It may be found in the NURS 8000 Course Readings module and is also available on reserve in the library.

Gill, D.J. & Wells, D.L. (2000). Forever different: experiences of living with a sibling who has a traumatic brain injury. *Rehabilitation Nursing*, 25(2), 48-53.

A detailed description of expectations for critique #2 will be provided in class several weeks before Week 8.

a) Read the following (on reserve in the library):

Polit, D.F., & Hungler, B.P. (1993). Qualitative research and analysis. In *Essentials of Nursing Research: Methods, Appraisal, and Utilization* (3rd ed. pp. 323-348). Philadelphia: J.B. Lippincott.

As well, review relevant sections of chapter 11 from your text Burns & Grove (2003).

- b) Review the five standards to evaluate qualitative studies described by Burns & Grove (2003, pp. 428-433).
- c) Read any relevant chapters in your text that may assist you in understanding the research article and therefore in your preparation to critique the article.
- Assignment Details to be provided

Research Critique #3 (17% of final grade). Due Friday, Week 16

The format for this assignment is an individual in-class written critique. The purpose of the critique is for students to demonstrate comprehension of *quantitative* research concepts by critiquing one research study. Students will be provided with the research article to be critiqued and choices regarding questions to be answered.

Students must achieve a satisfactory mark (50%) in Research Critique #3 to achieve credit for the course.

III. Decision Making Project: Reflective Journal, Poster Presentation & Written Literature Review – 40%

Reflective Journal due Friday, Week 6 Literature Review due Friday, Week 14 Poster Display due Friday, Weeks 14 & 15 (½ class Week 14 & ½ class Week 15)

1. Reflective Journal - 10%

The reflective journal will be graded using the Reflective Journal Marking Criteria Form. This form will be handed out during the first class and is to be attached by each student to the inside cover of their journal.

Assignment Details

Reflective Journal – due Friday, Week 6

The purpose of the reflective journal is to help students reflect on their thinking and decision making in relation to the case studies. Reflective journals must be **submitted in week 6** by the beginning of class. The submission should be a maximum of 4 pages.

While the journal is submitted only once during the term, it is an expectation that students will make ongoing entries that document their thinking and decision-making skills. Entries should not be limited to thinking and decision making that occurs only in class. Rather reflection, thinking about thinking and decision-making that occurs between classes should also be noted and as much as possible written down. Much of what is written in the reflective journal should be useful in the development of your personal decision-making model. The reflective journal should be a work in progress for the final project.

The following are guidelines for the reflective journal submitted:

Read 4 decision-making articles. Consider the following questions:

- Chose 1 2 concepts from each article and describe how these concepts either fit of do not fit your thinking. Provide examples from practice that demonstrate use of the concepts. (4 marks)
- Describe two (2) theories of decision making. How are they different? How does each fit with your thinking and decision making in practice? Give an example of how each theory fits with your decision making in practice. (6 marks)

2. Decision Making Poster and Literature Review - 30%

The purpose of this assignment is to develop a systematic approach to decision making by developing a decision making model. You will articulate and demonstrate the processes of your own decision-making model through the use of an example derived from one of the course health situations, practicum or a work setting.

The submission for the Decision-Making Project consists of 2 parts:

- A. A written review of 6 to 8 articles on decision-making (see Decision Making References). This should be a **maximum of 5 pages of text** using APA format. Your discussion should clearly demonstrate you have engaged in critical analysis and synthesis of the literature on decision-making.
- B. A poster presentation depicting your personal decision-making model. The poster should include identification of the concepts included in your model, definitions, rationale for inclusion of the elements and a description of the relationships between the elements. In displaying your poster to peers, respond to questions about your decision-making model demonstrating its usefulness. This includes describing its strengths, weaknesses, missing pieces or gaps, and possible changes that you might make. Be prepared to provide examples to support your conclusions.

Please see assignment details below for further detail on each component of the Decision-making Project.

Assignment Details

To develop and demonstrate your personal decision-making model:

- 1. Review the literature on decision making, identifying key elements of the decision making process based on several decision-making models.
- 2. Analyze and evaluate the key elements of the decision-making models. Consider the similarities and differences between the decision-making models and key elements/concepts. Identify missing pieces or gaps in the decision-making models. Describe how the elements are related to each other. Then, summarize what the theorists say and why you do or do not accept their perspectives.
- 3. Based on your review and analysis of the literature, synthesize what you have learned to create your decision making model. Identify the key elements that make up your model and describe the relationships between the elements. Develop a pictorial, mind map, chart or table for yourself and the viewer.
- 4. Critically analyze and evaluate your decision making model noting strengths, weaknesses, missing pieces or gaps, and any changes you might make. Based on evidence, draw conclusions as to the usefulness of your decision-making model.

Assignment Criteria

Content (40 marks)

A. Written literature review

- 1. Summarizes, critically analyzes and evaluates relevant literature on decision making in a formal paper. (20 marks) There is evidence of:
 - Identification of key elements of decision making processes based on several decision making models. (4)
 - Analysis of key elements from the literature on decision-making, noting similarities and differences between the decision making models. (7)
 - How the elements are related to each other. (3)
 - Missing pieces or gaps in the decision making models. (2)
 - Your evaluation of the decision making models and why you do or do not accept the perspectives of the theorists. (4)

B. Poster Presentation

- 2. Display a personal decision making model with a poster. (15 marks) The poster provides evidence of:
 - Synthesis of knowledge on decision making to create a personal decision making model. Identification, definition and description of key elements of a personal decision-making model (written on poster). (5)
 - A rationale for inclusion of the chosen elements (1-2 sentences written on poster). (5)
 - Identification and description of the relationships between the elements of the decision making model. (5)

- 3. The student demonstrates an ability to explicates the decision making model. (5 marks) There is evidence of:
 - How the model cues or provides prompts for analysis, evaluation and synthesis of knowledge and data related to the course concepts, including prompts for analysis of multiple perspectives. (2)
 - Critical analysis and evaluation of the decision making model noting strengths, weaknesses, missing pieces or gaps, and any changes you might make. (2)
 - Conclusions drawn as to the usefulness of your decision-making model. Provides evidence to support your conclusions. (1)

Format (10 marks)

A. Written literature review

- 1. APA style is used. Sources of information are identified. References, citations and quotations are noted appropriately. Neutral language is used and repetition avoided. (2 marks) You are advised to review the APA style guidelines.
- 2. Organization, clarity, logic, and flow are appropriate for an academic paper. (2 marks)
- 3. Grammar, spelling, and punctuation are appropriate. (1 mark)

B. Poster Presentation

- 1. Visual image of decision-making model is clear. Poster is visually appealing & interesting. (4)
- 2. Questions and/or discussion of issues are encouraged and dealt with professionally and effectively. (1)

Schedule

| Date/ Week # | Outcome/Material Covered Assignment & Due Date | Reference/ Reading |
|-----------------|---|--|
| January 13 | Orientation to Course Critical Thinking for Decision-making | Duchscher, J.E., (1999). Catching the wave: understanding the concept of critical thinking. Journal of Advanced Nursing, 29(3), 577-583. |
| Week 1 | Peek 1 Discussion of Duchscher (1999). Research content: Research overview. Begin case study: Olga Padrowski | Burns & Grove, chapters 1 and 2 |
| January 20 | Case study: Olga Padrowski cont'd | Independent research and reading. |
| Week 2 | Week 2 Research problems, purposes and hypotheses. | Naylor, M.D., Brooten, D., Campbell, R., Jacobsen, B.S., Mezey, M.D., Pauly, M.V. & Schwartz, J.S. (1999). Comprehensive discharge planning and home follow-up of hospitalized elders: a randomized trial. <i>The Journal of the American Medical Association</i> , 281(7), 613 – 620. |
| | | Gordon, M., Murphy, C.P., Candee, D. & Hiltunen, E. (1994). Clinical judgment: an integrated model. <i>Advances in Nursing Science</i> , 16(4), p. 55-70. |
| | | Burns & Grove, chapter 3 |
| January 27 | Case study: Olga Padrowski – part 2 | Independent research and reading |
| Week 3 | Research content: Review of literature Discussion: expectations of oral critique for | Burns & Grove, chapter 4 |
| next week. | Gordon, M., Murphy, C.P., Candee, D. & Hiltunen, E. (1994). Clinical judgment: an integrated model. <i>Advances in Nursing Science</i> , 16(4), p. 55-70. | |
| February 3 | Case study: Olga Padrowski cont'd | Independent research and reading. |
| Week 4 | Week 4 Due: research critique #1. Oral discussion of application to the Olga Padrowski case. | Naylor, M.D., Brooten, D., Campbell, R., Jacobsen, B.S., Mezey, M.D., Pauly, M.V. & Schwartz, J.S. (1999). Comprehensive discharge planning and home follow-up of hospitalized elders: a randomized trial. The <i>Journal of the American Medical Association</i> , 281(7), 613 – 620. |
| | | Burns & Grove (1999). Relevant chapters (5, 12) related to Naylor et al (1999). |

| February 10 Week 5 | Wrap up case study: Olga Padrowski case. Summarize decision making processes for the Olga Padrowski case and apply decision-making model. Theory & research frameworks. | Independent research and reading related to Olga case and decision-making. Burns & Grove, chapter 5 Group Participation Evaluation Group Work Summaries are presented |
|-----------------------|---|--|
| February 17 Week 6 | Students present initial draft of personal decision-making frameworks for critique. Research Content: Introduction to qualitative research Due: Reflective journal at start of class | Burns & Grove chapter 11 Polit, D. F., & Hungler, B.P. (1993). Qualitative research and analysis. Ch 11. In Essentials of Nursing Research: Methods, Appraisal, and Utilization (3 rd ed. pp. 323-348). Philadelphia: J.B.Lippincott Gill, D.J. & Wells, D.L. (2000). Forever different: experiences of living with a sibling who has a traumatic brain injury. Rehabilitation Nursing, 25(2), 48-53. |
| February 24 Week 7 | Begin Case Study: John Cahill Research content: Ethics in nursing research & Clarifying research designs | Burns & Grove (1999). Relevant chapters related to Gill & Wells (2000). Burns & Grove, chapters 6 & 7 Pesut, D.J., & Herman, J. (1998). OPT: transformation of nursing process for contemporary practice. <i>Nursing Outlook</i> , 46, p. 29-36. |
| March 3 Week 8 | Case Study: John Cahill cont'd Research content: Populations and samples Due: Research critique #2 – written in class | Independent research and reading Burns & Grove, chapter 8 |
| March 10 Week 9 | Case Study: John Cahill - Part 2 Research content: Measurement and data collection | Independent research and reading. Burns & Grove, chapter 9 |

| March 24 Week 10 | Case Study: John Cahill cont'd Research content: Understanding statistics Summarize decision making processes for John Cahill case and apply decision-making model. | Independent research and reading. Burns & Grove, chapter 10 |
|---------------------|---|---|
| March 31 Week 11 | Wrap up case study: John Cahill | John Cahill comes to visit Independent research and reading Group Work Summaries are presented |
| April 7 Week 12 | Begin case study: Matthew Moore & discuss decision making processes for Mathew Moore case study | Burns & Grove (2003). Teekman, B. (2000). Exploring reflective thinking in nursing practice. <i>Journal of Advanced Nursing</i> , 31(5), 1125-1135. |
| April 7 Week 13 | Good Friday - no class | |
| April 21 Week 14 | Due: Decision making literature review at start of class. Decision Making Poster Presentations Case Study: Matthew Moore cont'd | Teekman, B. (2000). Exploring reflective thinking in nursing practice. <i>Journal of Advanced Nursing</i> , 31(5), 1125-1135. Independent research and reading |
| April 28 Week 15 | Due: Decision Making Poster Presentations Wrap up case study. | Independent research and reading. Group Work Summaries are presented |
| May 5 Week 16 | Due: Research critique #3 – written in class | Group Participation Evaluation Course Evaluations |

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