NUR260 Nursing Research and Informatics

Summer 2022

NUR260 Nursing Research and Informatics

3 units of theory
Pre-requisites: Acceptance into A-BSN program
Placement in curriculum: Prelicensure requirement

Dates: 5/9/22 – 8/25/22
Day and Time: Thursdays 1300-1600
Room: 108
Course Faculty: Dr. Dianthe Hoffman
Faculty office: Room 203
Faculty email: dhoffman@westmont.edu
Faculty phone: 559-972-6693
Faculty office hours:

> Mondays: 1200-1300 by zoom/phone
> Thursdays: 08-09, 12-13, 16-17 in office or zoom/phone
> Fridays: 0900-1100 by zoom/phone

Open door policy --- Students are welcome to meet with the instructor at any time during scheduled office hours. The student may also contact the instructor to schedule a meeting time.

* Zoom instructions - Send a text to or call my cell phone informing me that you would like to meet and then will log into Hoffman Office hours zoom link. You can use your phone, device or computer to join the meeting.

I. Important Information
This is a course in a series of prelicensure nursing courses to prepare the nursing student for the safe, patient-centered and family-supported, evidence-based, compassionate care in a variety of healthcare settings. The best way to be prepared for your lecture and clinical experience is to maintain a healthy mental, physical, and spiritual life. Come to class after a good night's sleep, eat nutritious food, and stay current with reading assignments. To help with your success in this course and program, it is not suggested you work more than 20 hours per week if you have to work.

Westmont catalogue course description
The nursing research course explores the basics of qualitative, quantitative, and mixed methodology to explore a variety of research designs and frameworks. Research problems, purposes and hypothesis will be explained and nursing students will learn how to write a PICOT question. Students will be exposed to statistical methods for data analysis. Nursing is an evidence-based practice and students will learn the importance of nurses conducting nursing research. This course will also integrate the importance of nursing informatics as a way to measure the outcomes of patient care by tracking, trending, and analyzing the data collected through the electronic medical records and other data collection applications.

Instructor's further description

As providers of care, you will learn quickly why the practice of nursing is evidence-based and why it is important to have bedside caregivers as nursing researchers. Who better to change practice with evidence than those at the bedside? You will learn how to read a study so you understand the purpose, design, findings, and application to our practice in nursing. You will also explore the importance of the literature review which will continue to be helpful in this program.

Writing Intensive Course

This course fulfills Westmont's General Education requirement for a Writing Intensive Course within the Major. Students will be asked to submit and review peer drafts that call for careful attention to the written word. Content, clarity, and style will be evaluated.

Student Learning Outcomes for Writing/Speech Intensive Courses

- Communicate in written form for a variety of purposes and audiences across the curriculum

Instructional Activities

- Course requires sufficient writing—at least four papers totaling at least 16 pages—in a sequence of related Assignments.
- Writing is spread throughout the course in a sequence of related assignments.
- Writing may include journal writing, article reviews, essays, research papers, scientific lab reports, business reports and plans, lab abstracts, paper revision and editing assignments, peer reviewing and editing, etc.
- Course provides significant writing instruction, including at least one assignment with drafts.

Grading Criteria

- Ability to construct a clear central message that includes purposeful and inviting ideas, insightful arguments and reasons to accept these arguments, relevant and substantive supporting material and audience-centered appeals.
- Organization of the message, including creative introductions, compelling and strategic structure, smooth transitions, and an effective conclusion.
- Communication style, engaging the audience with discipline-appropriate language use and artfully constructed sentences.

ABSN Program Mission

Prepares faithful servant leaders to provide patient-centered and family supported safe, compassionate care for diverse populations and communities across the lifespan and in all health care settings.

AACN Baccalaureate Essentials (2018)

The Commission on Collegiate Nursing Education (CCNE) is an autonomous accrediting agency, contributing to the improvement of the public's health. A specialized/professional accrediting agency, CCNE strives to promote the quality and integrity of baccalaureate and graduate nursing programs. Following are the nine baccalaureate essentials used as the framework for the current curriculum. In 2021 the

Commented [CV1]: Writing Intensive information

Commented [DH2]: syllabus explicitly identifies the course as writing-intensive, and it clearly defines expectations for performance. Students are informed that their work will be evaluated for clarity and style * in addition to content

Commented [DH3]: 4 papers 16 pgs total, See also pg 8,9 and final paper rubric

Essentials were revised and will be integrated into the curriculum over the next three years.

I   Liberal Education for Baccalaureate Generalist Nursing Practice
II   Basic Organizational and Systems Leadership for Quality Care and Patient Safety
III   Scholarship for Evidence-Based Practice
IV   Information Management and Application of Patient Care Technology
V   Healthcare Policy, Finance, and Regulatory Environments
VI   Interprofessional Communication and Collaboration for Improving Patient Health Outcomes
VII Clinical Prevention and Population Health
VIII Professionalism and Professional Values
IX   Baccalaureate Generalist Nursing Practice

AACN Baccalaureate Essentials (revised 2021)
The Essentials: Core Competencies for Professional Nursing Education provides a framework for preparing individuals as members of the discipline of nursing, reflecting expectations across the trajectory of nursing education and applied experience. The *Essentials* introduce 10 domains that represent the essence of professional nursing practice and the expected competencies for each domain. The competencies accompanying each domain are designed to be applicable across four spheres of care (disease prevention/promotion of health and wellbeing, chronic disease care, regenerative or restorative care, and hospice/palliative/supportive care), across the lifespan, and with diverse patient populations.

Domains for Nursing
Domains are broad distinguishable areas of competence that, when considered in the aggregate, constitute a descriptive framework for the practice of nursing.

The Ten Domains:
Domain 1-Knowledge for Nursing Practice
Domain 2-Person-centered Care
Domain 3-Population Health
Domain 4-Scholarship for Nursing Practice
Domain 5-Quality and Safety
Domain 6-Interprofessional Partnerships
Domain 7-Systems-based Practice
Domain 8-Information and Healthcare Technology
Domain 9-Professionalism
Domain 10-Personal, Professionals, Leadership Development
(The Essentials: Core Competencies for Professional Nursing Education, 2021)

Quality and Safety in Nursing Education (QSEN) Competencies

1. *Patient-centered Care -* Recognizing the patient or designee(s) as the source of control and full partner in providing caring and coordinated care based on respect and diversity.
2. *Safety -* Minimizing risks of harm for patients and providers by evaluating systems and individual performances.
3. *Informatics -* Using information and technology in communicating, managing knowledge, mitigating errors, and supporting all types of decision-making.
4. *Teamwork and Collaboration -* Functioning effectively at all levels of nursing and fostering open communication amongst inter-professional team members while encouraging mutual respect and a shared achievement of safe quality care.
5. *Quality Improvement -* Continuously monitoring the healthcare system for outcomes impacting safe quality care and methods to improve design care for optimal results.
6. *Evidence-based Practice -* Integrating best current evidence with clinical experts and patient/family/groups that value the delivery of optimal healthcare.

Program Learning Outcomes (PLO)
1. Exhibit Christian character and servant leadership while providing compassionate care for a diverse population in communities across state, national, and global settings.
2. Evidence-based best practices, critical thinking, and clinical reasoning, inform clinical judgement for the provision of patient-centered, safe, quality care.
3. Create patient education plans that are culturally specific to the patient and that incorporate the family support system.
4. Communicate effectively with the interprofessional team to ensure a wholistic approach to patient-centered care.
5. Continue inquisitive learning by using the Electronic Medical Record and Informatics to meet quality metrics in a variety of healthcare and geographic settings.
6. Advocate for healthcare policies for the underserved, vulnerable populations to ensure equity with access to care for prevention, remedial, supportive, and rehabilitative nursing care regionally, nationally, and globally.

Course Learning Outcomes (CLO)

1. Discusses the importance of the literature review when beginning a research project or as a way to collect information to support scholarly writing.
2. Describes the use of informatics and evidence-based practice.
3. Uses the PICOT framework prior to a literature review to assist in finding relevant articles for nursing inquiry.
4. Examines ethics in nursing research.
5. Discusses confidentiality, privacy, and security in informatics.
6. Appraise the Electronic Medical Record and its benefit as a tool in care delivery systems.
7. Compares and contrast quantitative, qualitative, mixed, and outcomes research.
8. Examines different types of statistics used in research.
9. Evaluates own practice to ensure it is evidence-based and outcomes oriented.

10. Defends the need for ongoing nursing research to drive practice change and quality nursing care.
11. Articulates importance of nursing research and evidence based best practices when creating patient plans of care.

PLO and CLO Alignment Table

Program Learning Outcomes	Course Learning Outcomes
1. Exhibit Christian character and servant leadership while providing compassionate care for a diverse population in communities across state, national, and global settings.	N/A
2. Evidence-based best practices, critical thinking, and clinical reasoning, inform clinical judgement for the provision of patient-centered, safe, quality care.	2. Describes the use of informatics and evidence-based practice. 3. Uses the PICOT framework prior to a literature review to assist in finding relevant articles for nursing inquiry. 9. Evaluates own practice to ensure it is evidence-based and outcomes oriented. 10. Defends the need for ongoing nursing research to drive practice change and quality nursing care. 11. Articulates importance of nursing research and evidence based best practices when creating patient plans of care.
3. Create patient education plans that are culturally specific to the patient and that incorporate the family support system.	N/A
4. Communicate effectively with the interprofessional team to ensure a wholistic approach to patient-centered care.	N/A
5. Continue inquisitive learning by using the Electronic Medical Record and Informatics to meet quality metrics in a variety of healthcare and geographic settings.	6. Appraise the Electronic Medical Record and its benefit as a tool in care delivery systems. 11. Articulates importance of nursing research and evidence based best practices when creating patient plans of care.
6. Advocate for healthcare policies for the underserved, vulnerable populations to ensure equity with access to care for prevention, remedial, supportive, and rehabilitative nursing care regionally, nationally, and globally.	11. Articulates importance of nursing research and evidence based best practices when creating patient plans of care.

Required Textbooks

Title	Author	Publisher	ISBN#
Understanding Nursing Research: Building an Evidence-based Practice (7th ed.)	Susan K. Grove and Jennifer R. Gray	Elsevier	978-0323532051
Applied Clinical Informatics for Nurses (2nd ed.)	Susan Alexander, Karen H. Frith, and Haley Hoy	Jones and Bartlett Learning	9781284129175
Nursing Diagnosis textbook of your choice (can be a bundled application on smart phone)			
Nursing Drug textbook of your choice (can be a bundled application on smart phone)			
Publication Manual of the American Psychological Association (7thed.)	American Psychological Association	American Psychological Association	978-143383216

Suggested Resources
1. Articles
2. Position Papers
3. Healthcare Policies
4. Westmont College Library and online databases (EBSCO, ProQuest, ERIC, CINALH)

Assessment of CLOs (Assignments, quizzes, exams)
The assessments used in this course to measure your learning and meeting the content objectives and course learning outcomes will include class participation, quizzes, exams using NCLEX style questions, and a signature assessment (comprehensive assessment).

Course Learning Outcomes	Instructional activity	Assessment
1. Discusses the importance of the literature review when beginning a research project or as a way to collect information to support scholarly writing.	Lecture, class discussion, shared experiences, research critiques	Quizzes, homework assignments,
2. Describes the use of informatics and evidence-based practice.		
3. Uses the PICOT framework prior to a literature review or finding relevant articles for class projects.		*PICOT Question
4. Examines ethics in nursing research.		

5. Discusses confidentiality, privacy, and security in informatics. 6. Appraise the Electronic Medical Record and its benefit as a tool in care delivery systems. 7. Compares and contrast quantitative, qualitative, mixed, and outcomes research. 8. Examines different types of statistics used in research. 9. Evaluates own practice to ensure it is evidence-based and outcomes oriented. 10. Defends the need for ongoing nursing research to drive practice change and quality nursing care. 11. Articulates importance of nursing research and evidence based best practices when creating patient plans of care.		*Literature Review *Quantitative research critique *Qualitative research critique *Detailed Quantitative Critical Appraisal

> **Commented [DH4]:** Writing is spread throughout the course in a sequence of related assignments rather than concentrated in a large paper at the end.

Class participation	= P/NC
Quizzes	= 80 pts
Homework assignments	= 20 pts
*Literature Review	= 100 pts
*Quantitative research critique	= 50 pts
*Qualitative research critique	= 50 pts
*Detailed Quantitative Critical Appraisal	= 200 pts
Total	**=500 pts**

> **Commented [DH5]:** These activities may include journal writing, article reviews, essays, research papers, scientific lab reports, business reports and plans, lab abstracts, paper revision and editing assignments, peer reviewing and editing, etc

- ***Fulfills Westmont's General Education requirement for a Writing Intensive Course within the Major.**
- **Student must pass course with 75% to progress.**

> **Commented [DH6]:** * Clearly stating which assignments meet writing intensive course within the major

II. Course Policies
Grading
Grade points per unit of credit are assigned on the following scale:

Letter Grade	Percentage	Grade Points Earned
A	100 % to 94.0%	4
A-	< 94.0 % to 90.0%	3.7
B+	< 90.0 % to 87.0%	3.3

B	< 87.0 % to 84.0%	3.0
B-	< 84.0 % to 80.0%	2.7
C+	< 80.0 % to 77.0%	2.3
C	< 77.0 % to 74.0%	2.0
C-	< 74.0 % to 70.0%	1.7
D+	< 70.0 % to 67.0%	1.3
D	< 67.0 % to 64.0%	1.0
D-	< 64.0 % to 61.0%	0.7
F	< 61.0 % to 0.0%	0

P (At least D-)	No grade points assigned. Not computed in the grade point average
F	0 grade points
NC (F)	No grade points assigned. Not computed in the grade point average
W	No grade points assigned. Not computed in grade point average.
WF	No grade points assigned. Not computed in grade point average.
WP	No grade points assigned. Not computed in grade point average.
WX	No grade points assigned. Not computed in grade point average.

Westmont does not compute the units and grades students earned at other colleges in its grade average. (Exception: Courses and grades taken as part of a Westmont off-campus program are posted on the Westmont transcript and will be calculated in the Westmont GPA.)

Apart from the exceptions identified below, all courses at Westmont are graded using a letter scale (A, B, C, D, F).
Instructor Initiated Exceptions:
1. For pedagogical reasons, an instructor may elect to use P/NC grade reporting in any class not approved for GE credit. It is assumed that the same grade-reporting
   system will be applied to the entire class.
2. With the approval of the General Education Committee, P/NC grade reporting may be used in appropriate, GE-approved courses.
3. When P/NC grade reporting is used, the syllabus must reflect this fact. In addition, departments are encouraged to include a notice in the catalog that the course may use P/NC grading.

Attendance Policy

Purpose:
Attendance at regular class meetings is an important manifestation of the commitment to the nursing program. Because this is an accelerated program missing one day could

be detrimental to a student's success. The following attendance policies are intended to encourage attendance while recognizing special circumstances and the rights of students and faculty.

Procedure:
When attendance is not possible, for whatever reason, students are responsible for the missed course work and activities and should consult this faculty member as to whether and how the work might be made up. Due to the nature of this course, it is vital that the student attend class. The student shall be allowed without penalty (beyond the possible loss of credit for missed or late work) **one** absence from course.

When a student persistently neglects class assignments or has excessive absences, the faculty member may request that the student withdraw from the class or may notify the student that he or she has been terminated with a grade of F in that particular class. A student may not be dropped from a course for missing classes unless the number of UNEXCUSED absences equals or exceeds TWICE the number of times the class meets per week **(e.g., TWO absences in a weekly class).** Through the 12th week of the semester, the faculty member may assign a grade of W instead of an F.

In order to drop a student from a class, the faculty member must send a request to the Registrar. The request must include the rationale for why the student should be dropped from the class and evidence of at least 2 attempts to contact the student and note areas of concern regarding the student's level of engagement with the course. The Registrar may refer some requests to the Academic Senate Review Committee for action. If approved, the student will be removed from the class.

Office of Disability Services
Students who have been diagnosed with a disability are strongly encouraged to contact the Office of Disability Services as early as possible to discuss appropriate accommodations for this course. Formal accommodations will only be granted for students whose disabilities have been verified by the Office of Disability Services. These accommodations may be necessary to ensure your equal access to this course.

Please contact Sheri Noble, Director of Disability Services. (310A Voskuyl Library, 565-6186, snoble@westmont.edu) or visit the website for more information:
http://www.westmont.edu/_offices/disability

Dress Code
Comfortable, non-binding clothing

Academic Integrity
When students join our college community, they are expected, as apprentice scholars, to search for truth with integrity and accuracy. This quest requires humility about our abilities, respect for the ideas of others, and originality in our thinking. Since Westmont is a Christian community, the integrity of our scholarship is rooted in the integrity of our faith. We seek to be followers of Christ in the classroom, in the library, and at the

privacy of our computers. Violations of academic integrity are a serious breach of trust within the Westmont community because they violate the regard for truth essential to genuine learning and Christian consistency. Such deception also hurts those students who do their work with integrity. Violations of Academic Integrity may consist of cheating (the use of unauthorized sources of information on an examination or other assignment), falsification (misrepresentation of facts in any academic project or obligation) or plagiarism (the use of someone else's words or ideas without giving proper credit). Faculty and students should operate in an environment of mutual trust and respect. Faculty will expect students to act in ways consistent with academic integrity. However, for both scholarly and spiritual reasons, cheating, falsification, plagiarism and all other violations of academic integrity will not be tolerated in the Westmont community. Please familiarize yourself with the entire Westmont College Academic Integrity Policy. This document defines different violations of academic integrity and their consequences. It also contains very helpful information on strategies to recognize violations of academic integrity before they occur. Dishonesty in the clinical setting, will not be tolerated and students will be removed followed by program suspension or termination.

Technology in the Classroom
Laptops, tablets, and smart phones can be used in the classroom with the permission of the faculty. The use of smart phones in the clinical setting will depend on each clinical setting's rules. Smart phones in the clinical setting can be used for clinical related resources (drug book, Tabers, calculation, etc). Recording lectures is also at the discretion of the faulty and permission must be granted.

Emergencies
In the event that an emergency occurs during instruction, it is important to be familiar with the practices in place for the classroom. Please review the document at https://integready.app.box.com/AnticipatingInClass and direct any questions or concerns to the Office of Institutional Resilience.

III. Weekly course schedule

Textbooks
Grove-Understanding Nursing Research
Alexander-Applied Clinical Informatics for Nurses

*Subject to change at any time, you will be notified of any changes

Week	Content Objectives (Reading)	Activities and assignments	Outcome Measurement
1 **May 12**	Alexander – Chapter 10 1. Describe the manner in which Information Technology can be deployed in order to improve patient safety. Alexander – Chapter 11 2. Define and describe the electronic health record and its common features. 3. Review the benefits of EHR use in daily practice. 4. Review the challenges of HER Alexander – Chapter 12 5. Understand how clinical decision-support systems (CDSS) can improve patient safety. Alexander – Chapter 15 6. Examine informatics tools used in the surveillance and management of acute and chronic diseases. 7. Discuss methods to apply informatics tools to improve public health. Alexander – Chapter 16 8. Discuss ways to use digital patient tools to engage and empower patients. 9. Discuss challenges and issues related to the use of the Internet in patient engagement and empowerment.	Lecture, Discussion, homework	Quiz
2 **May 19**	Grove – Chapter 1 1. Define research, nursing research, and evidence-based practice. 2. Describe the purposes of research in implementing an evidence-based nursing practice. 3. Discuss the purposes of research for implementing an Evidence-based nursing practice. 4. Describe the following strategies for synthesizing healthcare research: systematic review, meta-analysis, meta-synthesis, and mixed-methods systematic review. 5. Examine the levels of research evidence available to nurses for practice. 6. Discuss your role in research as a professional nurse. Alexander – Chapter 1 7. Define Clinical Informatics and Nursing Informatics p.7 8. Discuss the culture of health care in the United States pp.8-10 9. Discuss the benefits and challenges of clinical informatics Alexander – Chapter 3 10. Discuss methods of integrating EBP. 11. Apply knowledge of EBP to patient care. 12. Discuss best practice approaches to integrate EBP in clinical decision-support systems.	Lecture, Discussion, homework	PICOT Question, homework, quiz

Week/Date	Objectives	Teaching Method	Assignment
3 May 26	1. Describe the benefits and challenges related to evidence-based practice in nursing. 2. *Use the PICO format to formulate clinical questions to identify evidence for use in practice. 3. Implement research-based protocols, algorithms, guidelines, and policies in your practice. 4. Describe the models used to promote evidence-based practice in nursing. 5. Describe process to implement national evidence-based guidelines in your practice. 6. Describe the significance of evidence-based practice centers and translational research in developing evidence-based health care. (Grove - Chapter 13)		
4,5 June 2	1. Discuss the purposes of the literature review in quantitative and qualitative research. 2. Conduct a computerized search of the literature. 3. Process the literature. 4. *Write a literature review to promote the use of evidence-based knowledge in nursing practice from a synthesis of critically appraised literature. (Grove - Chapter 6)	Lecture, Discussion, Library tour, in-class activity	Literature review
6 June 9	1. Define Quantitative Research 2. Identify the types of quantitative research - descriptive, correlational, quasi-experimental, and experimental. 3. Define terms relevant to quantitative research. 4. Identify the steps of the quantitative research process. 5. Read quantitative research reports. 6. *Conduct initial critical appraisal of quantitative research report. pp.52-58 (Grove - Chapter 2)	Lecture, discussion	Initial Quantitative Appraisal
7 June 16	1. Define Qualitative Research 2. Describe four qualitative research designs—phenomenological research, grounded theory research, ethnography, and exploratory-descriptive qualitative research—and their intended outcomes. 3. Identify differences in sampling, recruitment, data collection, and data analysis for quantitative and qualitative research. 4. Describe strategies used by qualitative researchers to increase the credibility and transferability of their findings. 5. *Conduct initial critical appraisal of qualitative research report. pp.64 (Grove - Chapter 3)	Lecture, discussion	Initial Qualitative Appraisal
8 June 23	1. Identify the historical events influencing the development of ethical codes and regulations for nursing and biomedical research. 2. Describe the ethical principles and human rights that require protection in research. 3. Identify the essential elements of the informed consent process in research. 4. Understand the role of the Institutional Review Board (IRB) and the levels of review. 5. Describe the current issues in ethical research surrounding genomics research, use of animals in studies, and research misconduct. (Grove - Chapter 4) 6. Identify the key components of laws governing the privacy and security of patient health information, contrasting ethical and legal requirements. 7. Review the requirements of laws governing protection of personal health information. (up to p.90) (Alexander – Chapter 6)	Lecture, discussions, case studies	Case study, quiz

Commented [DH7]: Students begin writing process with PICOT question, discussed in class, peer and instructor reviewed with feedback

Commented [DH9]: **Last hour of the following classes - weeks 4-15 spent with either - students presenting discussing topics with peer feedback, 1:1 time with instructor reviewing papers, peers 1:1 assisting with papers. Additionally numerous 1:1 mtgs with instructor reviewing papers with feedback given

Commented [DH10]: Meets WI Obj:
-construct a clear central message that includes purposeful and inviting ideas
-Relevant and substantive supporting material
-various audience-centered appeals (Lit Review Table included in assignment)

Commented [DH8]: Paper #1 - "You are to locate research articles on your pre-approved PICO(T) topic. You are to write a <5-page summary of the general theme(s) of these articles as it pertains to your topic. Include a minimum of 5 articles. A reference sheet, listing the articles should also be included (this does not count toward your page limit). The typed summary should adhere to APA format. "
Grading rubric follows above requirements

Commented [DH12]: Meets Writing Intensive Objective:
-the organization of their messages, providing appropriately creative introductions, compelling and strategic structure, smooth transitions, and an effective conclusion

Commented [DH11]: Paper #2 - Instructions from Canvas Assignment:
Description of Assignment:
You are to locate a research article on your pre-approved topic. You are to write a 1-3 page summary of your appraisal using the guidelines on page 55 of your text.
Grading of Assignment:
The attached rubric will be used to assess your initial critical appraisal.

Commented [DH14]: Meets Writing Intensive Objective:
-the organization of their messages, providing appropriately creative introductions, compelling and strategic structure, smooth transitions, and an effective conclusion

Commented [DH13]: Paper #3: Instructions from Canvas Assignment
Description of Assignment:
You are to locate a research article on your pre-approved topic. You are to write a 1-3 page summary of your appraisal using the guidelines on page 64 of your text.
Grading of Assignment:

Commented [DH16]: ADDL ASSIGNMENT MEETING Writing Intensive Objective:
Instructions in Canvas for Ethical Dilemma Discussion:

Commented [DH15]: Meets Writing Intensive Objective:
These activities may include journal writing, article reviews, essays, peer reviewing

9 **June 30**	Grove – Chapter 12 1. Discuss the importance of conducting critical appraisals of research Grove - Chapter 5 2. Define research problems and purposes. 3. Identify research topics, problems, and purposes in published quantitative and qualitative studies. 4. *Critically appraise the research problems and purposes in studies. 5. Examine research objectives, questions, and hypotheses in research reports. 6. Differentiate among the types of hypotheses (associative versus causal, simple versus complex, nondirectional versus directional, and statistical versus research). 7. *Critically appraise the quality of objectives, questions, and hypotheses in studies. 8. Differentiate the types of variables included in research reports.	Lecture, discussion, in-class work	Quizzes, homework, Critical Appraisal
10 **July 7**	Grove – Chapter 6 9. *Critically appraise the literature review section of a published study for current, quality sources, relevant content, and synthesis of relevant content.		
11 **July 14**	Grove - Chapter 7 10. Define theory and the elements of theory (concepts, relational statements, and propositions). 11. Describe the purpose of a research framework. 12. Identify research frameworks developed from nursing and other theories. 13. *Critically appraise the frameworks in published studies. Grove - Chapter 8 14. Describe the concepts relevant to quantitative research designs. 15. Identify the noninterventional or nonexperimental designs (descriptive and correlational) and intervention or experimental designs (quasi-experimental and experimental) commonly used in quantitative nursing studies. 16. Understand concepts relevant to quantitative research designs. 17. Examine the design validity of quantitative (Descriptive, correlational, quasi-experimental, experimental) studies. 18. *Critically appraise the descriptive and correlational designs in studies. 19. *Critically appraise the quasi-experimental and experimental designs in studies.		
12 **July 21**	Grove - Chapter 9 20. Describe sampling theory with its relevant concepts. 21. *Critically appraise the sampling criteria in published studies. 22. Identify the specific type(s) of probability and nonprobability sampling methods implemented in quantitative studies. 23. *Critically appraise the sample size of quantitative studies. 24. *Critically appraise the sampling processes implemented in quantitative studies. 25. *Critically appraise the settings used for quantitative and qualitative studies.		

Commented [DH18]: Meets Writing Intensive Objective:
-The course provides significant writing instruction or includes a substantive assignment in which students submit at least one draft for comments from the professor and then revise the draft to take account of these comments
*See above, for details on reviews

Commented [DH19]: Paper #4 - Begin work, discussions, peer and instructor review on Critical Appraisal, 1 hr at end of class dedicated to variety of work with final paper - discussion, peer review, instructor feedback, research on topic

13 **July 28**	Grove - Chapter 10 26. Describe measurement theory and its relevant concepts of directness of measurement, levels of measurement, measurement error, reliability, and validity. 27. *Critically appraise the reliability and validity of measurement methods in studies. 28. *Critically appraise the accuracy, precision, and error of physiological measures used in studies. 29. *Critically appraise the sensitivity, specificity, negative predictive value, and likelihood ratios of diagnostic tests implemented in research and clinical practice. 30. *Critically appraise the measurement strategies—physiological measures, observations, interviews, questionnaires, and scales—used in quantitative studies. 31. Describe the data collection process. 32. *Critically appraise the quality of the data collection section in quantitative studies		
14 **Aug. 4**	Grove - Chapter 11 33. Understand theories and concepts of the statistical analysis process. 34. Identify the steps of the data analysis process. 35. Identify descriptive analyses, such as frequency distributions, percentages, measures of central tendency, and measures of dispersion, conducted to describe the sample and study variables in research reports. 36. Determine the appropriateness of inferential statistics in studies. 37. Compare and contrast statistical significance and clinical importance of results. 38. *Critically appraise statistical results, findings, limitations, conclusions, generalization of findings, nursing implications, and suggestions for further research a study.		
14,15 **Aug. 11**	Grove – Chapter 12 39. *Evaluate the credibility and meaning of the Study Findings 40. *Conduct a critical appraisal of quantitative research report. pp.338-357		

Commented [DH17]: Final paper due, see attached instructions, guidelines, rubric for detail

Grove Chapter 12 - <mark>CRITICAL APPRAISAL GUIDELINES - QUANTITATIVE STUDY</mark>
<mark>*GRADING RUBRIC ON PAGE 8</mark>

Step 1: Identifying the Steps or Elements of the Study; and Step 2: Determining the Study Strengths and Limitation

1. Writing quality
    a. Was the writing style of the report clear and concise with relevant terms defined?
2. Title
    a. Is the title clearly focused?
    b. Does the title include key study variables and population?
    c. Does the title indicate the type of study conducted—descriptive, correlational, quasi-experimental, or experimental—and the variables (Gray et al., 2017; Shadish, Cook, & Campbell, 2002)?
3. Authors
    a. Do the authors have credentials such as a doctor of philosophy (PhD) that qualified them to conduct the presented study?
    b. Do the authors have previous research or clinical experience that qualified them to conduct the presented study?
    c. Do any of the authors have a conflict of interest related to the study, such as financial interest in the company that produced the intervention implemented in the study?
4. Abstract
    a. Was the abstract clearly presented?
    b. Does the abstract include purpose, design highlights, sample, intervention (if applicable), and key results (APA, 2010).
5. Research problem (see Chapter 5)
    a. Is a problem statement provided? If a problem statement is not provided, can you infer the problem or gap in the literature?
    b. Is the problem significant to nursing and clinical practice (Brown, 2018)?
6. Purpose
    a. State the purpose of the study.
    b. Does the purpose narrow and clarify the focus of the study (Fawcett & Garity, 2009; O'Mathúna & Fineout-Overholt, 2015)?
7. Literature review (see Chapter 6)
    a. Examine the literature review.
    b. Are most references peer-reviewed primary sources? Do the authors justify references that are not peer-reviewed primary sources?
    c. Are most of the references current (number and percentages of sources published in the last 5 and 10 years)? Are references older than 10 years, measurement or theoretical sources, landmark, seminal, or replication studies?
    d. Is the content directly related to the study concepts or variables? Are the types of sources and disciplines of the source authors appropriate for the study concepts or variables?

    e. Are the studies critically appraised and synthesized (Gray et al., 2017; Hart, 2009)? Is a clear concise summary presented of the current empirical and theoretical knowledge in the area of the study, including identifying what is known and not known (O'Mathúna & Fineout-Overholt, 2015)? Does the study address a gap in the knowledge identified in the literature review.

8. Framework or theoretical perspective (see Chapter 7)
    a. Is the framework explicitly expressed, or must you extract the framework from statements in the introduction, literature review, or other section(s) of the study?
    b. Does the framework identify, define, and describe the relationships among the concepts of interest? If a model or conceptual map of the framework is present, is it adequate to explain the phenomenon of concern (Gray et al., 2017)?
    c. How is the framework related to nursing's body of knowledge (Alligood, 2014; Smith & Liehr, 2014)?
    d. If a proposition from a theory is to be tested, is the proposition clearly identified and linked to the study hypotheses (Fawcett & Garity, 2009; Smith & Liehr, 2014)?

9. Research objectives, questions, or hypotheses (see Chapter 5)
    a. List any research objectives, questions, or hypotheses.
    b. Are the objectives, questions, or hypotheses clearly expressed and logically linked to the research purpose?
    c. Are the objectives, questions, or hypotheses logically linked to the concepts and relationships (propositions) in the framework (Chinn & Kramer, 2015; O'Mathúna & Fineout-Overholt, 2015; Smith & Liehr, 2014)?
    d. Are hypotheses stated to direct the conduct of quasi-experimental and experimental research (Shadish et al., 2002)?

10. Variables (see Chapter 5)
    a. Identify the study variables or concepts. Attribute or demographic variables should be provided. A study usually includes independent and dependent variables or research variables, but not all three types of variables.
       i. Demographic variables
       ii. Independent variables
       iii. Dependent variables
       iv. Research variables or concepts
    b. Identify the conceptual and operational definitions for independent and dependent variables.
    c. Are the variables clearly defined (conceptually and operationally) and based on previous research or theories (Chinn & Kramer, 2015; Gray et al., 2017; Smith & Liehr, 2014)?
    d. Are the variables reflective of the concepts identified in the framework?

11. Research design (see Chapter 8).
    a. Identify the specific design of the study.
    b. Does the design provide a means to examine all the objectives, questions, hypotheses?
    c. Is the design used in the study the most appropriate design to obtain the required data (Gray et al., 2017)?
    d. Treatment

 i. Does the study include a treatment or intervention?
 ii. Is the treatment clearly described (Eymard & Altmiller, 2016)?
 iii. Is the treatment appropriate for examining the study purpose and hypotheses?
 iv. Was a protocol developed to promote consistent implementation of the treatment to ensure intervention fidelity (Eymard & Altmiller, 2016)?
 v. Did the researcher monitor implementation of the treatment to ensure consistency?
 vi. If the treatment was not consistently implemented, what might be the impact on the findings?

e. Groups
    i. Did the study have more than one group?
    ii. If the study had more than one group, how were study participants assigned to groups?
    iii. If a treatment was implemented with more than one group, were the participants randomly assigned to the treatment group or were the treatment and comparison groups matched? Were the treatment and comparison group assignments appropriate for the purpose of the study?
    iv. If more than one group was used, did the groups appear equivalent?
    v. Were pilot study findings used to design this study? If yes, briefly discuss the pilot and the changes made in this study based on the pilot (Gray et al., 2017; Shadish et al., 2002).
    vi. Did the researcher identify the threats to design validity (statistical conclusion validity, internal validity, construct validity, and external validity) and minimize them as much as possible (Gray et al., 2017; Shadish et al., 2002)?

12. Sample (see Chapter 9).
    a. Is the sampling method probability or nonprobability? Is the specific sampling method used in the study to obtain the sample identified and appropriate (Gray et al., 2017)?
    b. What are the sampling inclusion criteria and sampling exclusion criteria, and were both clearly identified and appropriate for the study (O'Mathúna & Fineout-Overholt, 2015)?
    c. Is the sample size identified (Aberson, 2010)?
    d. Is the refusal or acceptance rate identified? Is the sample attrition or retention rate addressed? Are reasons provided for the refusal and attrition rates?
    e. Is a power analysis reported? Was the sample size appropriate, as indicated by the power analysis? If groups were included in the study, is the sample size for each group equal and appropriate (Grove & Cipher, 2017)?
    f. Is the sampling process adequate to achieve a representative sample? Is the sample representative of the accessible and target populations?
    g. Did the researchers define the target and accessible populations for the study?
    h. How was informed consent/assent obtained?
    i. Was the process used for informed consent/assent appropriate for the study population?

13. Setting (see Chapter 9)
    a. What is the study setting? b.Is the setting appropriate for the study purpose?

14. Measurement (see Chapter 10)
    a. Measurement Strategies
        i. Identify each study variable that was measured.
        ii. Identify the name and author of each measurement strategy.

   iii.   Identify the type of each measurement strategy (e.g., Likert scale, visual analog scale, physiological measure, or existing database).

   iv.   Identify the level of measurement (e.g., nominal, ordinal, interval, or ratio) achieved by each measurement method used in the study (Grove & Cipher, 2017).

   v.   Describe the reliability of each scale for previous studies and this study. Identify the precision of each physiological measure (Bialocerkowski, Klupp, & Bragge, 2010; DeVon et al., 2007).

   vi.   Identify the validity of each scale and the accuracy of physiological measures (DeVon et al., 2007; Ryan-Wenger, 2017).

    b. Scales and questionnaires
       i. Are the instruments clearly described?
       ii. Are techniques to complete and score the instruments provided?
       iii. Did the researcher re-examine the validity and reliability of the instruments for the present sample?
       iv. If the instrument was developed for the study, is the instrument development process described (Gray et al., 2017; Waltz et al., 2017)?
    c. Observation
       i. Is what is to be observed clearly identified and defined?
       ii. Are the techniques for recording observations described (Waltz et al., 2017)?
       iii. Is interrater reliability described?
    d. Interviews
       i. Do the interview questions address concerns expressed in the research problem?
       ii. Are the interview questions relevant for the research purpose and objectives, questions, or hypotheses (Gray et al., 2017; Waltz et al., 2017)?
    e. Physiological measures
       i. Are the physiological measures or instruments clearly described (Ryan-Wenger, 2017)? If appropriate, are the brand names of the instruments identified?
       ii. Are the accuracy, precision, and error of the physiological instruments discussed (Ryan-Wenger, 2017)?
       iii. Are the physiological measures appropriate for the research purpose and objectives, questions, or hypotheses?
       iv. Are the methods for recording data from the physiological measures clearly described? Is the recording of data consistent?
    f. Do the measurement methods selected for the study adequately measure the study variables? Should additional measurement methods have been used to improve the quality of the study outcomes (Waltz et al., 2017)?
    g. Do the measurement methods used in the study have adequate validity and reliability? What additional reliability or validity testing is needed to improve the quality of the measurement methods (Bialocerkowski et al., 2010; DeVon et al., 2007; Waltz et al., 2017)?
15. Data collection (see Chapter 10)
    a. Is the data collection process clearly described (Fawcett & Garity, 2009; Gray et al., 2017)?
    b. Do the data collected address the research objectives, questions, or hypotheses?
    c. How did the research ensure that the data collection process was conducted in an accurate and consistent manner?
       i. Who collected the study data?
       ii. Is the training of data collectors clearly described and adequate?
       iii. Were methods of standardization such as standardized forms or computerized data used?

d. Was IRB approval obtained before data collection?
e. Were the data collection methods ethical?
f. Did any adverse events occur during data collection, and were these appropriately managed?

16. Data analyses (see Chapter 11)
    a. Statistical Analyses and Results
        i. Identify the purpose (description, relationships, or differences) for each analysis technique.
        ii. List the statistical analysis technique performed.
        iii. List the statistic.
        iv. Provide the specific results.
        v. Identify the probability (p) of the statistical significance achieved by the result.
    b. Are data analysis procedures clearly described?
    c. Do the data analysis techniques address the study purpose and the research objectives, questions, or hypotheses (Gray et al., 2017; Grove & Cipher, 2017)?
    d. Are data analysis procedures appropriate for the type of data collected (Grove & Cipher, 2017; Plichta & Kelvin, 2013)?
    e. Did the researcher address any problem with missing data and explain how this problem was managed?
    f. Statistical significance.
        i. Was the level of significance or alpha identified? If yes, what was the level of significance (0.05, 0.01, or 0.001)?
        ii. Is the sample size sufficient to detect significant differences if they are present?
        iii. Was a power analysis conducted for nonsignificant results (Aberson, 2010)?
    g. Are the results presented in an understandable way by narrative, tables, figures, or a combination of methods (APA, 2010; Grove & Cipher, 2017)?
    h. Are the results interpreted appropriately?

Step 3: Evaluating the Credibility and Meaning of the Study Findings

17. Interpretation of findings
    a. Are the findings consistent with previous research findings (Gray et al., 2017; O'Mathúna & Fineout-Overholt, 2015)?
    b. Are findings discussed in relation to each objective, question, or hypothesis?
    c. Are various explanations for significant and nonsignificant findings examined?
    d. Are the findings clinically important (O'Mathúna & Fineout-Overholt, 2015)?
    e. Are the findings linked to the study framework (Smith & Liehr, 2014)? If so, do the findings support the study framework?
    f. What questions emerge from the findings, and does the researcher identify them?
18. Limitations
    a. What study limitations did the researcher identify?
    b. Does the study have limitations not identified by the researcher?
    c. Could the limitations of the study have been prevented or controlled by the researcher?

19. Conclusions
    a. What conclusions did the researchers identify based on their interpretation of the study findings?
    b. Do the conclusions fit the findings from this study and previous studies?
    c. How did the researcher generalize the findings? Did the researcher generalize the findings appropriately?

20. Nursing implications
    a. What implications do the findings have for nursing practice (Melnyk et al., 2017; O'Mathúna & Fineout-Overholt, 2015)?
    b. Were the identified implications for practice appropriate based on the study findings and on the findings from previous research (Melnyk & Fineout-Overholt, 2015)?
21. Future research
    a. What suggestions for further study were identified?
    b. Were quality suggestions made for future research (O'Mathúna & Fineout-Overholt, 2015)?
    c. Is the description of the study sufficiently clear for replication?
    d. Did money, commitment, the researchers' expertise, availability of subjects, facilities, equipment, and/or ethics make the study unfeasible to conduct (Gray et al., 2017)?
22. Critique summary
    a. Review the components of the critique you just conducted. Consider the following to formulate your critique summary.
        i. Were all relevant components covered with adequate detail and clarity?
        ii. What were the study's greatest strengths and greatest weaknesses?
        iii. Were the rights of human subjects protected (Creswell, 2014; Gray et al., 2017)?
        iv. Do you believe the study findings are valid? How much confidence can be placed in the study findings?
        v. The evaluation of a research report should also include a final discussion of the quality of the report. This discussion should include an expert opinion of the study's quality and contribution to nursing knowledge and practice (Melnyk et al., 2017; O'Mathúna & Fineout-Overholt, 2015).

> **Commented [DH20]:** Meets Writing Intensive Objective: insightful arguments and reasons to accept these arguments, relevant and substantive supporting material,

Step 1: Identifying the Steps of the Research Process in Studies

Initial attempts to comprehend research articles are often frustrating because the terminology and stylized manner of the report are unfamiliar. Identifying the steps of the research process in a quantitative study is the first step in critical appraisal. It involves understanding the terms and concepts in the report, as well as identifying study elements and grasping the nature, significance, and meaning of these elements.

Begin by reviewing the abstract, reading the study from beginning to end, and highlighting or underlining the steps of the quantitative research process that were identified previously. An overview of these steps is presented in Chapter 2. Reread the article, underline the terms you do not understand, and determine their meaning from the glossary at the end of this text. After reading and comprehending the content of the study, you are ready to write your initial critical appraisal of the study. To write a critical appraisal, you need to identify each step of the research process concisely and respond briefly to the guidelines and questions in Box 12.2.

Step 2: Determining the Strengths and Weaknesses in Studies

The second step in critically appraising studies requires determining strengths and weaknesses in the studies. The ideal ways to conduct the steps of the research process are then compared with the actual study steps. During this comparison, you examine the extent to which the researcher followed the rules for an ideal study, and the study elements are examined for strengths and weaknesses.

You also need to examine the logical links or flow of the steps in the study being appraised. For example, the problem needs to provide background and direction for the statement of the purpose. The variables identified in the study purpose need to be consistent with the variables identified in the research objectives, questions, or hypotheses. The variables identified in the research objectives, questions, or hypotheses need to be conceptually defined in light of the study framework. The conceptual definitions should provide the basis for the development of operational definitions. The study design and analyses need to be appropriate for the investigation of the study purpose, as well as for the specific objectives, questions, or hypotheses. Examining the quality and logical links among the study steps will enable you to determine which steps are strengths and which steps are weaknesses.

The questions in Box 12.2 help you explore the strengths and weaknesses of the steps of the research process and the logical links among these steps. In particular, the abstract, problem, purpose, literature review, framework, methodology, results, and discussion elements of the article are critically appraised. Read the questions and then make judgments about the steps in the study (see Box 12.2). You need to provide a rationale for your decisions and document from relevant research sources, such as those listed previously in this section and in the references at the end of this chapter. For example, you might decide that the study purpose is a strength because it addresses the study problem, clarifies the focus of the study, and is feasible to investigate (Fawcett & Garity, 2009; Gray et al., 2017; O'Mathúna & Fineout-Overholt, 2015).

Step 3: Evaluating the Credibility and Meaning of Study Findings

Evaluating the credibility and meaning of study findings involves determining the validity, significance, and meaning of the study by examining the relationships among the steps of the study, study findings, and previous studies. The steps of the study are evaluated in light of previous studies, such as an evaluation of present hypotheses based on previous hypotheses, present design based on previous designs, and present methods of measuring variables based on previous methods of measurement (Waltz et al., 2017). The findings of the present study are also examined in light of the findings of previous studies. An evaluation builds on the conclusions reached during the first two stages of the critical appraisal so the credibility, validity, and meaning of the study findings can be determined.

You need to re-examine the findings, conclusions, and implications sections of the study and the researchers' suggestions for further study. Use the credibility and meaning of the study section of the critique appraisal guide presented in Box 12.2 as a guide to summarize your evaluation.

<mark>GRADING RUBRIC FOR CRITICAL APPRAISAL</mark>

Rating	5	4	3	2-1 (see comments)	Points
STEP 1	The summary clearly outlines the main research question, methods, results, and implications in the student's own words.	Most of the article is summarized, but the student may not clearly cover all aspects (i.e., the main research question, methods, results, and implications).	The student does not clearly summarize the main points of the article (i.e., the main research question, methods, results, and implications) and/or includes inaccurate information.		30
STEP 2	The student provides an insightful analysis of the article, answering all or nearly all of the questions assigned. The student articulates novel ideas that clearly go beyond what is in the article itself.	The student provides an analysis of the article by answering most of the questions assigned. The ideas presented are mostly novel.	The student does not clearly move beyond a summary of the article to provide an analysis. No new ideas are contributed beyond what is in the article itself.		30
STEP 3	The student provides an insightful analysis of the article, answering all or nearly all of the questions assigned. The student articulates novel ideas that clearly go beyond what is in the article itself. The analysis is clear and rational.	The student provides an analysis of the article by answering most of the questions assigned. The ideas presented are mostly novel, going beyond what is in the article itself.	The student does not clearly move beyond a summary of the article to provide an analysis. No new ideas are contributed beyond what is in the article itself, or the analysis is overly confusing.		20
Length	Adheres to 5 – 10-page criteria.	Exceed or does not meet 5 – 10 page criteria by ½ page or less.	Exceed or does not meet 5 – 10 page criteria by ½ to 1 page.	Exceed or does not meet 5 – 10 page criteria by more than 1 page.	10
Format	Font, spacing, and APA format are correct.	Font and spacing, font and APA, or spacing and APA are correct.	Font, spacing, or APA format is correct.	Font, spacing, and APAP format are incorrect.	5
Grammar	There is 1 or less grammatical error.	There are 2 grammatical errors.	There are 3 grammatical errors.	There are 4 or more	5
TOTALS & ADDL COMMENTS					100

Commented [DH21]: Meets Writing Intensive Objective:
- their ability to construct a clear central message that includes purposeful and inviting ideas
-insightful arguments and reasons to accept these arguments

Commented [DH22]: Meets Writing Intensive Objective:
- their communication style, engaging their audiences with discipline-appropriate language use and artfully constructed sentences

Commented [DH23]: Paper 5-10 pages