

## STUDENT GUIDE TO MS COMPREHENSIVE EXAM

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# College of Nursing

UNIVERSITY OF COLORADO  
ANSCHUTZ MEDICAL CAMPUS

### The Comprehensive Exam

The Comprehensive Exam is the final requirement for graduation from the University of Colorado (CU) College of Nursing (CON). The purpose of the exam is for the student to demonstrate her/his accomplishment of the terminal outcome competencies of the CON Master's Program (see last page). A satisfactory Comprehensive Exam is the demonstration of the student's ability to discuss the integration and application of theory, research methodology, application of evidence to practice, and advanced clinical or systems decision-making specific to the student's specialty option, as well as to engage in a scholarly dialogue with CON faculty regarding issues important to nursing.

The primary resource for policy statements is this guide.

### I. Eligibility

- a. Students are eligible to take the master's Comprehensive Exam in their last semester of *didactic* coursework for the MS degree, if their progress in those courses is satisfactory.
- b. Students must be registered for a minimum of one credit hour in the semester of the exam.
- c. Notify the Graduate Programs Advisor and Specialty Director of intent to take the Comprehensive Exam via email. Complete the forms sent by the Graduate Programs Advisor and then return via email. The Graduate Programs Advisor will obtain signatures from the appropriate faculty.
- d. A faculty chairperson (Comprehensive Exam Chair) is either selected by the Specialty Director or selected by the student, depending on specialty, along with 2 other faculty members to form the Comprehensive Exam Committee. Other specifications include:
  - i. The chairperson **must** be from the student's program option and must have a Graduate Faculty appointment in the College of Nursing. The chair can assist the student in choosing the other members of the committee. The chair does not need to be the student's advisor.
  - ii. Two of the committee members, including the chair, must be from the core faculty of the student's program option and may hold either a Regular or Special Graduate Faculty appointment.
  - iii. The third member of the committee can be from **outside** the program option's core faculty. This person does not need to obtain an appointment.

### II. Preparing for the Exam



- a. Scheduling the initial and any subsequent meetings with the chair prior to the date of the Comprehensive Exam is the responsibility of the student.
- b. An initial meeting between the student and the chair of the Comprehensive Exam committee is ***encouraged as early as possible, preferably in the semester prior to the Comprehensive Exam or early in the semester in which the exam is scheduled.***
- c. The **initial meeting** is to provide guidance in the preparation of the Comprehensive Exam as a demonstration of the MS program outcomes.
- d. The student will be prepared with a topic or issue for their Comprehensive Exam presentation and discuss the relevance and appropriateness of this topic with the chair.
- e. The Comprehensive Exam chair and student will schedule additional meetings as necessary to adequately prepare for the Comprehensive Exam.
- f. **Another meeting** with the Comprehensive Exam chair is strongly recommended approximately 2 weeks before the scheduled Comprehensive Exam date. **The presentation will be reviewed by the chair at this time.** This meeting is strongly encouraged to evaluate the student's readiness for the exam.
  - a. If the student does not appear to be adequately prepared, it is the responsibility of the chair to delay the exam until the student is more likely to achieve success.

### III. Scheduling the Exam

- a. Students must meet all CON deadlines for graduation and Comprehensive Exam paperwork. It is strongly suggested that the student schedule their Comprehensive Exam date no later than 2 weeks before the last day to schedule the Comprehensive Exam. See the CON Academic Calendar, found on the CU CON Home Page, for these dates.
- b. Room reservations will be made for on-campus exams by the Graduate Programs Advisor upon receipt of completed paperwork. Completed paperwork to schedule the Comprehensive Examination should be submitted to the Graduate Program Advisor at least 2 weeks prior to the examination date.
- c. Most students must be present on campus to complete the Comprehensive Examination process (presentation, questions, and answer period). One committee member, excluding the chair, can be on zoom or video linking technology for the Comprehensive Exam.
- d. This rule does not apply to students matriculated in online-only options, such as iLead, VMHC, and Informatics students.
- e. Students who live further than 50 miles from campus should coordinate with their Specialty Director for options of an on-campus vs online Comprehensive Exam.

### IV. Comprehensive Exam Details

- a. The exam will begin at the designated time. Students should allow time prior to the start of the exam to acquire and set up equipment, if used, and prepare to present.
- b. The Comprehensive Exam is limited to two hours.
- c. The student will be expected to engage in a scholarly dialogue with the committee members. Potential questions from the committee may be related to the integration and application of theory, research methodologies, evidence-based practice, and advanced clinical/systems decision-making, knowledge from all graduate courses completed, specialty-specific outcomes, and the MS Program Outcomes. The student may be asked questions from any of the MS courses taken during their program of study.
- d. The Comprehensive Exam chair may modify any of the format guidelines, at his/her discretion; the student should be informed of any changes during the preparatory meetings with the Comprehensive Exam chair.



**e. PowerPoint presentation:**

1. **No more than 15-20 slides are allowed** in the presentation (excluding the title slide and reference slides), **using no smaller than a 24-point Times New Roman or similar font**. The number of content slides may be modified slightly with approval of the chair.
  2. Students are strongly encouraged to keep the presentation simple. Bullets for key items to be covered are suggested. Lengthy slides with many words are strongly discouraged. **Slides should be used to guide or illustrate and should not be read.**
  3. Student's ***success on the Comprehensive Examination is not related to the aesthetics*** of the PowerPoint presentation (e.g., colors, animation, etc.).
  4. **Reading from notes** is strongly discouraged. Students should be conversant regarding the majority of the presentation.
- b. On campus students will present in a room equipped with a monitor projector.
1. Room reservations for on-campus presentations will be made in rooms equipped with monitor projectors. Students will use the monitor projector to present their exam.
  2. Student may contact Education Support Services (303-724-8129) to make equipment arrangements for special monitor adapters, etc.
  3. Laptop computers are available from CON IT. Students may use their own computers.
  4. Students may distribute copies of the presentation to the Comprehensive Exam committee members at the beginning of the exam.

**V. Evaluation of the Student's Success**

When the Comprehensive Exam is completed, the committee members will ask the student to leave the room and evaluate the success of the candidate's exam. The majority of the committee must agree on the outcome.

Success is evaluated based on three possible outcomes:

**a. Pass**

1. The student successfully demonstrates the integration and application of Master's Program Outcomes which include the core courses of theory, research methodologies, evidence-based practice, and/or advanced clinical decision-making.
2. The student engages in scholarly dialogue, cites relevant and current evidence to support his/her position, and demonstrates good critical thinking skills (i.e., uses standards of critical thinking: is clear, accurate, precise, relevant, and logical).

**b. Pass, with stated conditions**

1. The student partially demonstrates the integration and application of Master's Program Outcomes which include information from core courses of theory, research methodologies, evidence-based practice, and/or advanced clinical decision-making.
2. The student's ability to adequately engage in scholarly dialogue is inconsistent, may not cite relevant or current evidence to support positions, and/or inconsistently demonstrates standards of critical thinking (is not clear, not accurate, not precise, not relevant, and/or not logical).
3. *At least one major area (i.e., research, practice, theory) meets the criteria for passing as noted under Pass.*
4. The Comprehensive Examination committee will generate the conditions and present those to the student.
  - i. The student has **four weeks** to satisfy the conditions identified by the Comprehensive Exam committee. Failure to satisfy these conditions within the four week time frame



will result in failure of the Comprehensive Examination. The CON may then recommend immediate dismissal from the program or allow the student to retake the exam. The decision to allow a retake is solely at the discretion of the specialty coordinator. Students are only allowed to retake the Comprehensive Examination once (total of 2 times; initial and retake).

**c. Fail**

1. The student is unable to demonstrate the integration and application of Master's Program Outcomes in more than one major area, including theory, research methodologies, evidence-based practice, and/or advanced clinical decision-making.
2. The student is unable to engage in scholarly dialogue, does not cite relevant or current evidence to support positions, and/or does not demonstrate standards of critical thinking (is not clear, not accurate, not precise, not relevant, and/or not logical).
3. A student who fails the examination is subject to immediate dismissal from the program on the recommendation of the specialty director and concurrence of the Associate Dean of Academic Programs.

**VI (A). Comprehensive Exam Content: Nurse Practitioner, Nurse-Midwife, and CNS Programs**

Students in **clinical options** will be able to demonstrate advanced **clinical decision-making** as demonstrated by the following:

- A. *Clinical case study* including:
  - a. Pharmacology
  - b. Pathophysiology
  - c. Differential diagnoses
  - d. Comprehensive, evidence-based plan for care
- B. AND/OR *scholarly discussion of an issue of clinical relevance to specialty* (i.e., teen pregnancy, health literacy, prevention of injury, quality issues, patient safety, system issues, etc.)
- C. *Additional Elements Include:*
  - a. Ability to articulate knowledge of advanced practice registered nursing (APRN) and *specialty scope of practice, skills, and professional performance competencies*.
  - b. Students will be *conversant and knowledgeable in nursing theory and/or borrowed theory* (i.e., theory, conceptual frameworks/models) from other disciplines. The theory or conceptual model does not need to come from nursing.
    - i. At least one primary source written by the theorist should be read in preparation for Comprehensive Exam and referenced; this could be a book, chapter, or article.
    - ii. Components and relationships of the theory or theories should be discussed, including some of the inherent strengths and weaknesses.
    - iii. The theory should be applicable to advanced practice registered nursing.
- b. Students will be *conversant and knowledgeable of the process of research generation and evidence-based practice (EBP)*. Specific content pertinent to this area may include:
  - a. Articulating knowledge of the necessary skill sets, such as how to identify questions for knowledge development; forming a PICO(T) question (i.e., patient population, intervention, comparison, outcomes, timeframe); search appropriate databases for relevant evidence; and critically critique and synthesize the literature.
  - b. Knowledge of the steps of the research process, research methodologies, and statistical analyses.



- c. Interpretation of qualitative and quantitative results (e.g., articulation of themes; interpretation of relative risk, odds ratio, confidence intervals, effect sizes, etc.)
- d. Application of research findings and relevant evidence in advanced practice registered nursing or nurse-midwifery.
- e. Strategies for implementation of research- and evidence-based practice (incl. knowledge of change and organizational theories, barriers and facilitators of EBP).

c. Exam Outline

For students in **clinical options**, the following format is suggested:

- a. Choose a patient scenario or topic that clearly demonstrates a need for a comprehensive literature review and evaluation of the literature.
- b. Choose a theoretical or conceptual model which is applicable to the clinical scenario or topic of interest.
  - i. Read at least 1 original article by the author of the theory/conceptual model
  - ii. Know tenets of model
  - iii. Thoroughly analyze the model or theory and delineate limits and generalizability and applicability to advanced practice
- c. Form a PICO(T) question.
- d. Describe in detail the significance of the problem.
- e. Incorporate pertinent physiology/pathophysiology, pharmacology, and physical assessment as appropriate.
- f. Perform a thorough review of literature.
- g. Evidence-based practice
  - i. Present a review of extant research or scholarly evidence that elucidates the topic and provides the evidence to guide practice.
  - ii. Defend databases selected: Cochrane, CINAHL, etc.
  - iii. Articulate level of evidence.
- h. Application to practice
  - i. Should practice related to the topic remain the same or be changed based on the evidence?
  - ii. Incorporate the advanced practice registered nurse role into the discussion

**VI(B). Comprehensive Exam Content: iLEAD, Informatics, VMHC:**

Students in **indirect clinical options** will be able to demonstrate advanced **systems thinking and critical decision-making** as demonstrated by the following:

- A. *Internship Project Overview* including:
  - a. Scholarly presentation of the project completed during the internship.
  - b. Project may or may not be evidence-based and use of evidence is clearly described, cited, and referenced.
  - c. Theoretical or conceptual framework(s) used that may include nursing, systems, leadership, change, improvement, communication, informatics theory, or other appropriate theories or models.
  - d. Comprehensive project plan and student contribution to the project.
- B. *Additional Elements Include:*
  - a. Ability to articulate knowledge of systems and leadership *competencies*.



- b. Students will be *conversant and knowledgeable in nursing theory* and/or borrowed theory (i.e., theory, conceptual frameworks/models) from other disciplines. The theory or conceptual model does not need to come from nursing.
  - i. At least one primary source written by the theorist should be read in preparation for comps and referenced; this could be a book, chapter, or article.
  - ii. Components and relationships of the theory or theories, including some of the inherent strengths and weaknesses
  - iii. Application to leadership, informatics, or specialty area of practice.
- d. Students will be *conversant and knowledgeable of the process of research generation or evidence-based practice (EBP)*. Specific content pertinent to this area may include:
  - a. Articulating knowledge of the necessary skill sets, such as how to identify questions for knowledge development; and may include forming a PICO(T) question (i.e., population, intervention, comparison, outcomes, timeframe); search appropriate databases for relevant evidence; critically critique and synthesize the literature.
  - b. Knowledge of the steps of the research process, research methodologies and statistical analyses.
  - c. Interpretation of qualitative and quantitative results (e.g., articulation of themes; interpretation of relative risk, odds ratio, confidence intervals, effect sizes, etc.).
  - d. Application of research findings and relevant evidence in designated specialty.
  - e. Strategies for implementation of research or evidence-based practice (incl. knowledge of change and organizational theories, barriers and facilitators of EBP).

**e. Exam Outline**

For students in indirect clinical options the following format is suggested:

- a. Choose a systems level leadership/ informatics/VMHC project beneficial to the organization in which you complete the internship and contributing to personal leadership/informatics/VMHC specialty development. The project should clearly demonstrate a need for a comprehensive literature review and evaluation of the literature.
- b. Choose a theoretical or conceptual model applied to the project.
  - i. Read at least 1 original article by the author of the theory/conceptual model
  - ii. Know tenets of model
  - iii. Thoroughly analyze the model or theory and delineate limits and generalizability and applicability to nursing leadership.
- c. Form a PICO(T) or evaluation question
- d. Describe in detail the significance of the problem
- e. Incorporate pertinent baseline data
- f. Perform a thorough review of the literature
- g. If Evidence-based practice
  - i. Present a review of extant research or scholarly evidence that elucidates the topic and provides the evidence to guide change or improvement.
  - ii. Defend databases selected: PubMed, CINAHL etc.
  - iii. Articulate level of evidence
- h. If research-based, include
  - i. Methods (design, measurement, data collection procedures, sample, and statistical analysis
  - ii. Application to practice



- iii. Should practice related to the topic remain the same or be changed based on the evidence/results?
- iv. Incorporate the nurse leader/informatics/VMHC specialty role into the discussion

### **Master's Program Outcomes**

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- Participate in an interdisciplinary healthcare team as a leader and an active member to promote quality and safe care at the patient, family, population, or system levels.
- Develop a professional, ethical, caring, and culturally sensitive approach when working with patients, families, populations, or systems.
- Integrate patient care technologies to improve patient, family, population, or system outcomes.
- Use theoretical frameworks to address patient, family, population, or system needs.
- Integrate evidence-based knowledge into managing the care of patients, families, populations, or systems to improve and protect health and wellness in Colorado and beyond.
- Formulate strategies to advocate for patients, families, populations, systems, or the nursing profession in Colorado and beyond.



**University of Colorado College of Nursing  
Comprehensive Exam Presentation Evaluation Rubric \***

*\*Optional: Check with your Specialty Director to determine if they use this rubric*

Pass	Incomplete	Fail	Element
2	1	0	Identifies a clinical scenario or patient problem of concern; describes background and/or significance of scenario or problem.
<b>Comments</b>			
2	1	0	Presents a clinical scenario (case study) that demonstrates a need for a comprehensive literature and formulates a PICO question that includes all necessary elements <ul style="list-style-type: none"> <li>• PICO question accurately addresses the scenario or problem.</li> </ul>
<b>Comments</b>			
2	1	0	Identifies two pertinent, reliable research studies from the review of the literature that can assist in answering the PICO question. <ul style="list-style-type: none"> <li>• Articulates the level of evidence.</li> <li>• Provides reliable evidence to guide practice.</li> </ul>
<b>Comments</b>			
2	1	0	Demonstrates ability to apply statistical analysis from evidence to address PICO question.
<b>Comments</b>			
2	1	0	Applies a theoretical or statistical model to the clinical scenario or problem. <ul style="list-style-type: none"> <li>• Presents the tenets of the theory or model.</li> <li>• Thoroughly analyzes the theory or model and identifies limits, generalizability, and applicability to advanced practice.</li> </ul>
<b>Comments</b>			
2	1	0	Applies findings to advanced practice: should practice related to the topic remain the same or be changed based on the evidence?
<b>Comments</b>			
2	1	0	Mechanics:



	<ul style="list-style-type: none"><li>• PowerPoint presentation is limited to 15 – 20 slides (excluding title and reference slides) using no smaller than 24-point Times New Roman or similar font.</li><li>• PowerPoint is free of spelling, grammatical, and APA style errors.</li><li>• Presentation is professional and presented without reading from slides or any other materials.</li></ul>
Comments	
<b>2</b> <b>1</b> <b>0</b>	Questions from committee are addressed accurately and professionally. <ul style="list-style-type: none"><li>• The student engages in scholarly dialog, cites relevant and current evidence to support his/her position</li><li>• The student demonstrates critical thinking skills that are clear, accurate, precise, relevant, and logical.</li></ul>
Comments	



### Final Evaluation of Comprehensive Exam

When the comprehensive exam is completed, the committee members will ask the student to leave the room and evaluate the success of the student's exam. The majority of the committee (2 of 3 members) must agree on the final outcome. There are 3 possible outcomes as noted below. The student will be notified immediately of the outcome.

#### Pass

The student successfully demonstrates the integration and application of theory, research methodologies, evidence-based practice, and advanced clinical decision-making. Additionally, the student engages in scholarly dialogue, cites relevant and current evidence to support his/her position, and demonstrates good critical thinking skills (i.e., uses standards of critical thinking: is clear, accurate, precise, relevant, and logical).

#### Incomplete

This is also known as **Pass with Stated Conditions**. The student partially demonstrates the integration and application of theory, research methodologies, evidence-based practice, and advanced clinical decision-making. The student's ability to adequately engage in scholarly dialogue may be inconsistent, may not cite relevant or current evidence to support positions, and/or inconsistently demonstrates standards of critical thinking (is not clear, not accurate, not precise, not relevant, and/or not logical).

- At least one major area (i.e., research, practice, theory) meets the criteria for passing as noted above.
- The comprehensive exam committee will generate the conditions and present those to the student.
- The student has four weeks to satisfy the conditions identified by the comprehensive exam committee. Failure to satisfy these conditions within the four weeks' timeframe will result in failure of the examination. The CON may then recommend immediate dismissal from the program or allow the student to retake the exam. The decision to allow a retake is solely at the discretion of the Specialty Director.
- Continuation may delay program completion and graduation. The student is responsible for any additional costs or fees associated with a delay.

#### Fail

The student is not able to demonstrate the integration and application of theory, research methodologies, evidence-based practice, and advanced clinical decision-making in more than one major area (i.e., research, practice, theory). The student is unable to engage in scholarly dialogue, does not cite relevant or current evidence to support positions, and/or does not demonstrate standards of critical thinking (is not clear, not accurate, not precise, not relevant, and/or not logical).

- A student who fails the examination is subject to immediate dismissal from the program on the recommendation of the specialty director, committee, and concurrence of the Associate Dean of Academic Programs.