

Testing Procedures

Testing students is a method of documenting student progression and/or attainment of course objectives. The purpose of testing is to provide information about an individual's achievement of a course objective or mastery of nursing content.

Proctoring Exams, by an individual other than the legal instructor of record, may be initiated by the nursing faculty. Faculty members are responsible for proctoring their own tests or **making necessary arrangements for proctoring needs prior to exam administration**. In special circumstances when scheduled faculty member is unavailable to proctor a test, arrangements must be made 72 hours in advance to identify a different proctor. Faculty are required to implement all Testing policies as outlined in the *Nursing Student Handbook*.

Test Construction Guidelines for Faculty

- Use a testing system supported by the College of Nursing to develop, administer, and review exams.
- Review test questions ~~greater than two (2) years old~~ for adherence to current content and format. Identify the year of development and/or year of review.
- Initiate and complete peer review for all new test questions prior to administration, **identifying the cognitive code and select all that apply/alternative format. The faculty reviewing the exam must sign that he/she has reviewed the exam.**
- Develop test blueprint for test construction **with test blue print only identifying the cognitive code and select all that apply/alternative format.**
- **A minimum of 75% of evaluation points must come from exams.**
- **A minimum of four (4) exams and a final must be provided in lecture courses which include, but not limited to the following:**

NRSE 2016
NRSE 2350
NRSE 3010
NRSE 3500
NRSE 3540
NRSE 3090
NRSE 4550
NRSE 4570
NRSE 4580
NRSE 4610
NRSE 4620
NRSE 3170
NRSE 3020
NRSE 3900
NRSE 4612

Test Construction – Types of Questions

As appropriate to course, all exams should comply with current NCLEX-style format as noted at www.ncsbn.org (i.e. multiple-choice, alternative format, multiple-select, chart exhibit, hot spots, etc.).

Test Construction – Cognitive Code

A Cognitive Code for Examinations has been adopted to ensure progression of critical thinking skills on examinations.

Cognitive Code

	Level 1	Level 2	Level 3
Semester	Knowledge/Comprehension	Application	Analysis, Synthesis, and Evaluation
Semester I	40%	50%	10%
Semester II	25%	60%	15%
Semester III	20%	65%	15%
Semester IV	10%	70%	20%
Semester V	5%	75%	20%

	Semester I	Semester II	Semester III	Semester IV	Semester V
“Select all that apply” “Alternate Format”	5%	5%	10%	10%	15%

Cognitive Code for LPN to BSN Program is as follows:

	Level 1	Level 2	Level 3
Semester	Knowledge/Comprehension	Application	Analysis, Synthesis, and Evaluation
Semester I	25%	60%	15%
Semester II	20%	65%	15%
Semester III	10%	70%	20%
Semester IV	5%	75%	20%

	Semester I	Semester II	Semester III	Semester IV
“Select all that apply” “Alternate Format”	5%	10%	10%	15%

Test Construction – Avoiding “test wise” flaws

Test wise flaws are errors that make it easier for the “test-wise” student to answer the questions correctly. Some examples of “test wise” flaws that need to be avoided include the following:

- Irrelevant Difficulty – Flaws in either the stem or options that make items difficult to understand for reasons unrelated to the content or focus of the assessment.
- Linguistic/Structural bias – Unnecessary linguistic complexity in the stem or options, grammatical error, and lack of consistency in the wording
- Cultural bias – Use of culturally specific information that is not equally available to all cultural groups.

Test Construction – Writing the Best Stem

Faculty shall include the following procedures when constructing stems for a question, **as appropriate**:

- The stem and options shall be complete sentences with a subject and verb.
- The stem shall contain the words client and “nurse” (i.e. The nurse caring for a ~~patient~~ **client** with....)
- The last sentence of the stem must be the question posed to the student **or a colon followed by appropriate completer statement** (i.e. Which ~~of the following~~ is the **most** appropriate nursing intervention?)
- The word “except” shall be avoided as part of the stem question.
- Mathematical questions shall contain rounding rule.
- All test questions must stand alone.
- When writing multiple choice test items, end the item in a question.
- Use “select all that apply” ~~type questions~~ instead of “all of the following except” type questions.
- **Do not use specific names (i.e. Ms. Jones, Mr. Jones).**
- **Do not specify gender or age unless information is specific to that population.**
- ~~Use of names in the test scenarios is discouraged.~~
- ~~Do not mention gender or age unless this information is pertinent to the test questions.~~
- Use “the nurse” rather than “you,” “he,” or “she.”
- Use as few words as possible.
- Test questions should reflect appropriate level for placement in the curriculum.

Test Construction – Writing the Best Options

- Faculty shall include the following procedures when constructing options for a question:
 - Faculty are not to release any portion of “test banks” to students.
 - Taking questions directly from **test banks**, without editing meaning of question or altering the question in some form, is prohibited.
 - Each option shall contain rationale for each question’s options.
 - Each option shall be validated with a page number and paragraph number for student reference, when applicable.
 - All options shall be realistic, plausible.
 - All options shall contain only important words – avoid unnecessary words.
 - One option choice is not included in another option choice.
 - Options shall be the same length.
 - When using a Select All that Apply, **one or more, including all options may be correct.**
 - Do not use an option of “all of the above”.
 - Words such as **most, best, first, next, last, increase, decrease, essential, priority, immediate** shall be bolded.

- Words **“Select all that apply”** shall be bolded.
- Pharmacology questions shall contain only generic **names of drugs** formulations after semester two. Semester two will use both generic and trade names.
- Do not use multiple ~~multiple~~ response.
 - Example: a) a and b
 - b) a, b, and c
 - c) a, b, c, and d
 - d) a and d
- Do not use “all of the above” or “none of the above” options.
- Make answer options consistent in length, wherever possible.
- Use plausible answer options.
- Present choices in a logical order, if possible.
- Vary placement of the correct answer among answer options, whenever possible.

Providing Peer Review of Exam Prior to Finalizing the Exam

1. After exam/test has been created, **email the exam and answer key to the faculty reviewing the exam within five (5) days of the scheduled exam/test to allow review and feedback. Feedback shall be provided to the faculty within 48 hours of the exam due date.**
2. The faculty reviewing the exam shall:
 - a. Review and correct spelling and grammar error.
 - b. Identify **each** question’s cognitive level.
 - c. ~~On hard copy of exam/test,~~ Identify the **total** percentage of knowledge/comprehension, application, analysis, synthesis, and evaluation questions **for the exam.**
 - d. **Identify how the exam’s cognitive code compares with the Handbook’s cognitive code.**
 - e. **Identify** ~~On the hard copy of the exam/test, identify~~ the number/percentage of “Select all that Apply” and “Alternative Format” questions.
 - f. **Identify how the exam’s** “Select all that Apply” and “Alternative Format” questions **compare with the Handbook’s cognitive code.**
 - g. **Ensure** the stem and options are complete sentences with a subject and verb.
 - h. **Ensure** each **option has been** validated with a page number and paragraph number for student reference, when applicable.

Test Guidelines for Students

- Students are to be informed in writing at the beginning of the semester of all testing dates and times and notified in writing and/or D2L of any subsequent changes to testing schedule.
- Students should be given clear criteria in the syllabus for the grading and the weight of each test on the final grade at the beginning of the course.
- Students may not use texts or references during exams unless otherwise specified by the faculty.
- Only one un-proctored exam may be administered per course. The maximum window of time for un-proctored or take-home exams to be completed is 36 hours.
- Only one (1) make-up exam will be allowed per course **with extraordinary circumstances. . Examples of extraordinary circumstances may include personal illness, hospitalization of an immediate family member, birth of a child, death in the immediate family, court appearance, military duty, ETSU/CON sponsored activities.**
- Make-up exams must be completed within 48 hours (excluding weekends and holidays) of the original exam date and time. Extensions past 48 hours may be granted at the discretion of the faculty. Exams not made up within the 48 hours or designated time approved by faculty will result

in a zero.

- Students must notify the exam/quiz proctor of testing issues prior to completion of the exam/quiz.
- **Students will not have the option of backward navigation to return to a question once an answer has been submitted.**

Exam/Test/Quiz Characteristics

- Unit Exams should include a maximum of 50 questions
- Comprehensive final exams should include a maximum of 100 questions.
- It is highly recommended that all **full semester courses** (15 week courses) should have a minimum of **four (4)** unit exams and one (1) final comprehensive exam. Courses formatted differently should consider an equivalent of exam rigor.
- Quiz format is at faculty discretion.
- **No partial credit shall be given for exam answers (such as with Select All that Apply question).**

Final Exams

- **Final exams questions shall be “new” to the student. Using unit exam questions on the final is prohibited.**
- Final exams must be scheduled during the university final exam week as stated in the academic calendar.
- Each course listed below are required to have a final comprehensive exam. This list is not inclusive. Other course coordinators may elect to have a final or comprehensive, final exam. Please refer to the course syllabus.

NRSE 2016
NRSE 2350
NRSE 3010
NRSE 3500
NRSE 3540
NRSE 3090
NRSE 4550
NRSE 4570
NRSE 4580
NRSE 4610*
NRSE 4620*
NRSE 3170
NRSE 3020
NRSE 3900
NRSE 4612

*These exams may be given outside university final exam schedule.

Testing - Test time limits

Testing time limits are pre-established by the team teaching the course. Generally, the student should be able to answer one question in 1.5 minutes in a multiple choice test.

Classroom Management During Tests

1. Faculty will direct students to place all personal belongings, notes, and electronic devices away from the testing area. Cell phones must be turned off during the exam. College of Nursing personnel will not be responsible for student belongings. Only calculators provided by the College of Nursing may be used or calculators enabled on testing computers.
2. No hats, hoodies, ear phones, headsets, or ear buds may be worn during the exam. Ear plugs may be allowed at the discretion and inspection of the exam proctor. Other personal belongings may be prohibited at the proctor's discretion.
3. Assure that students are seated as far as possible from one other. If deemed necessary to prevent cheating, faculty may reserve a second classroom, ask for additional proctors, and divide students between two classrooms during tests. If two classrooms are not available during regularly scheduled class times, faculty may reserve two classrooms at an alternate time specifically for testing.
4. Clearly specify a time limit for the exam.
5. Always have at least one proctor in the room, actively engaged in proctoring the exam.
6. Students are not allowed to ask questions during the exam
7. Use discretion in allowing a student to leave the room during a test.
8. Students must show a government issued photo ID when submitting completed test to exam proctor for examinations.
9. Faculty will take appropriate action upon suspicion of academic misconduct.
10. Academic integrity policy remains in effect during emergency interruptions. If an exam interruption occurs, students will power down the device and faculty will provide a code when the exam is to be resumed.
11. To ensure that the correct grade is being given to the correct student, all exam/quiz/assignment grades will be placed in D2L or given in person; no grades will be given to students by email or by telephone.

Faculty Review of Exam Results

Test analysis and item discrimination must be performed following each exam and the data used to determine adjustments prior to calculating grades. Use test analysis data in subsequent test development.

Reviewing the Exam with Students

Post-Exam Review of Exams promotes and documents student learning. Most students need clear short-term incentives to compel them to spend the time and effort necessary to learn the immense body of knowledge and skills required to become an effective nurse. They also need periodic feedback telling them to what degree their study efforts are successful and where they need to devote more attention. Finally, instructors and nursing schools must make certain that learning is taking place so that their graduates will be adequately prepared for their clinical experiences and nursing careers.

- Post-Exam Review **shall** be conducted on all exams and quizzes within one week after the exam was administered.
- The review may be scheduled outside of class time. If this is the situation, date, time, and location of exam review will be posted to D2L. A sign in sheet will be maintained in these situations.
- **When students are provided a copy of their printed exam**, it is the instructor's responsibility to ensure each student returns the printed exam.
- Faculty will provide answers for test items in a secure fashion for students to review.

- Students' personal belongings and electronic devices should be away from the exam review area as designated by instructor.
- Students must use professional, respectful communication during exam reviews.
- To maintain test security, test items will not be discussed during post- test reviews; however, individual students will be encouraged to schedule time with faculty to further discuss and review test information.

Management of Testing in the Testing Center

- A. Students with Official Documentation from Disability Services:
 - a. The electronic link to the University policy regarding students with documentation from Disability Services will be posted in the course syllabus.
 - b. Faculty will arrange testing accommodations through the Testing Center as early as possible; at least a 48-hour notice is needed for testing.
 - c. Students with forms from Disability Services may be given the opportunity to take class quizzes in the Testing Center. Alternate approaches will be used for unannounced quizzes.
 - d. Faculty will provide the Testing Center with the course exam/quiz schedules by the first week of each semester.
 - e. Faculty will complete a Test Administration Form indicating instructions for the test or quiz, including time allowed (students with forms from Disability Services are given double time from regular nursing students unless indicated otherwise on their disability form), any resources they may have (calculators, reference books, etc.) and a contact number in case students have questions.
 - f. For final exams, faculty will indicate on the Test Administration form how to handle extended time for final exams that may require a student break. Faculty may choose to give the test in two sections with a break in between or give the student the entire test, with a required, supervised break after 2 hours.
 - g. Faculty should refer to the ETSU Disability Services Accommodation Descriptions handout for reference, as needed.
 - h. The Testing Center prioritizes scheduling testing accommodations for students with disabilities forms from Disability Services before any other testing needs.
- B. Students with Special Needs: (i.e. make-up exams)
 - a. Faculty will arrange testing needs for students in advance by contacting the Testing Center as soon as possible; at least 48-hour notice is needed for testing.
 - b. Faculty will complete a form indicating instructions for the test, including time, any resources students may have (i.e. calculators, reference books, etc.) and a contact number in case students have questions.

Remediation Requirements for Exams

Any student scoring less than 75% on an exam, is required to complete ungraded remediation set by the faculty. The remediation must be completed and submitted to faculty prior to the next exam in the course. Failure to complete remediation prior to the next exam will result in a 0% for the exam.

Sources:

Morrison, S., Nilbert, A., & Flick, J. *Critical Thinking and Test Item Writing* (2nd edition).
 Health Education Systems, Inc., 2006.
 Didactic Curriculum Work Group, 2000.
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Oermann, M. & Gaberson, K. Evaluation and Testing in Nursing Education (2014).

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